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THE  
ELEMENTS  
OF  
ARCHITECTURE.

Collected by  
HENRY WOTTON Knight,  
*from the best Authors*  
and Exam-  
ples.

LONDON  
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THE  
MEMOIRS

OF  
ARCHBISHOP

OF DUBLIN

AND

OF THE



LONDON

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MDCCCLXII



# THE PREFACE.

**I** Shall not neede (like  
the most part of  
Writers) to cele-  
brate the Subiect  
which I deliuer. In that point I  
am at ease. For Architecture,  
can want no commendation, where  
there are Noble Men, or Noble  
mindes; I will therefore spend  
this Preface, rather about those,  
from whom I haue gathered my  
knowledge; For I am but a ga-  
therer and disposer of other mens  
stufte, at my best value.



## THE PREFACE.

Tacit. lib. i.  
Annal.

Our principall Master is Vitruuius and so I shall often call him; who had this felicitie, that he wrote when the Roman Empire was neere the pitch; Or at least, when Augustus (who favoured his endeauours) had some meaning (if he were not mistaken) to bound the Monarchie: This I say was his good happe; For in growing and enlarging times, Artes are commonly drowned in Action: But on the other side, it was in truth an unhappinesse, to expresse himselfe so ill, especially writing (as he did) in a season of the ablest Pennes; And his obscuritie had this strange fortune; That though he were



## THE PREFACE.

were best practised, and best followed by his owne Countrymen; yet after the reuiuing and republishing of good Literature, (which the combustions and tumults of the middle Age had vnciuillized) he was best, or at least, first vnderstood by strangers: For of the Italians that tooke him in hand, Those that were Gramarians seeme to haue wanted Mathematicall knowledge; and the Mathematicians perhaps wanted Gramer: till both were sufficiently conioyned, in Leon-Battista Alberti the Florentine, whom I repute the first learned Architect, beyond the Alpes; But hee studied more indeede to  
make



## THE PREFACE.

*make himselfe an Author, then  
to illustrate his Master. There-  
fore among his Commenters, I  
must (for my priuate conceite)  
yeild the chiefe praise vnto the  
French, in Philander; and to the  
high Germans, in Gualterus Ri-  
uius: who, besides his notes, hath  
likewise published the most elabo-  
rate translation, that I thinke is  
extant in any vulgar speech of  
the world: though not without be-  
wailing, now and then, some de-  
fect of Artificiall tearmes in his  
owne; as I must likewise; For  
if the Saxon, (our mother  
tongue) did complaine; as iustly  
(I doubt) in this point may the  
Daughter: Languages, for the  
most*



## THE PREFACE.

*most part in tearmes of Art and Erudition, retayning their originall pouertie, and rather growing rich and abundant, in complementall phrases and such froth. Touching diuers moderne men that haue written out of meere pra-  
dise, I shall giue them their due, upon occasion.*

*And now, after this short Cen-  
sure of others, I would faine satis-  
fie an Obiection or two, which  
seeme to lie somewhat heavily vp-  
on my selfe; It will be said that I  
handle an Art, no way suteable  
either to my employments, or to  
my fortune. And so I shall  
stand charged, both with Intru-  
sion, and with Impertinency.*

*A*

*To*



## THE PREFACE.

To the First I answer, that though by the ever acknowledged goodnesse of my most deare and gracious SOVERAIGNE; and by his long indulgent toleration of my defects. I have borne abroad some part of his civill service; yet when I came home, and was againe resolved into mine owne simplicitie, I found it fitter for my Pen (at least in this first publique aduventure) to deale with these plaine complements, and tractable Materials; then with the Laberynthes and Mysteries of Courts and States; And lesse presumption for mee, who have long contemplated a famous Republique, to write now of Architecture;



## THE PREFACE.

ecture; then it was anciently for  
\*Hippodamus the Milesian, to  
write of Republicques, who was  
himselfe but an Architect.

\* Aristot. 2.  
lib. Politi.  
cap. 6.

To the Second, I must shrink  
vp my shoulders, as I haue learn'd  
abroad, and confesse indeed, that  
my fortune is very vnable to ex-  
emplifie, and actuate my Specu-  
lations in this Art, which yet in  
trueth, made mee the rather euen  
from my very disabilitie, take en-  
couragement to hope, that my pre-  
sent Labour, would find the more  
fauour with others, since it was un-  
dertaken for no mans sake, lesse  
then mine owne. And with that  
cōfidence, I fel into these thoughts;  
Of which, there were two wayes to



## THE PREFACE.

*be deliuered; The one Historical, by description of the principall workes, performed already in good part, by Giorgio Vassari in the liues of Architects: The other Logicall, by casting the rules and cautions of this Art, into some comfortable Methode: whereof I haue made choice; not onely as the shortest and most Elementall; but indeed as the soundest. For though in practicall knowledges, euery complete example, may beare the credite of a rule; yet peraduēture rules should precead, that we may by them, be made fit to iudge of examples: Therefore to the purpose; for I will preface no longer.*

OF





OF  
THE ELEMENTS  
OF  
ARCHITECTURE.

*The I. part.*



*N* Architecture as in all other Operative Arts, the end must direct the Operation.

The end is to build well.

Well building hath three Conditions.

*Commoditie, Firmeries, and Delight.*

A common diuision among the Deliucers of this *Art*, though I know not  
A how,



how, some what misplaced by *Vitruvius* himselfe *lib. 1. cap. 3.* whom I shall be willinger to follow, as a Master of *Proportion*, then of *Method*.

Now, For the attayning of these *Intentions*, wee may consider the whole *Subiect*, vnder two generall Heads.

The *Seate*, and the *Worke*.

Therefore first touching *Scituation*.

The *Precepts* thereunto belonging, doe either concerne the *Totall Posture*, (as I may tearm it) or the *Placing* of the *Parts*: wherof the first sort, howsoever vsually set downe by *Architects* as a piece of their *Profession*: yet are in truth borrowed, from other *Learnings*: there being betweene *Arts* and *Sciences*, as well as betweene *Men*, a kinde of good fellowship, and communication of their *Principles*.

For you shall finde some of them, to be meereely *Physicall*, touching the quality



of *Architedure.* 3

litie and temper of the *Aire*: which being a perpetuall ambient, and ingredient, and the defects thereof, incorrigible in single *Habitations* (which I most intend) doth in those respects, require the more exquisite caution; That it be not too *grosse*, nor too *pene-tratiue*; Not subiect to any foggy noysomnesse, from *Fenns* or *Marshes* neere adioyning; nor too *Mineral* exhalations, from the Soile it selfe. Not vndigested, for want of *Sunne*; Not vnexercised, for want of *Winde*: which wereto liue (as it were) in a *Lake*, or standing *Poole* of *Aire*, as *Alberti* the *Florentin Architect*, doth ingeniously compare it.

Some doe rather seeme a little *Astro-logical*, as when they warne vs from Places of malign *Inflaence*: where *Earth-quakes*, *Contagions*, *Predigious Births*, or the like, are frequent without any euident cause: whereof the Consideration is peraduenture not altogether



vaine: Some are plainly *Oeconomical*;  
 As that the *Seate* be well watered, and  
 well fewelled, That it bee not of too  
 steepie and incommodious *Accesse* to  
 the trouble both of friends and *familie*.  
 That it lie not too farre, from some  
 nauigable *Riuer* or *Arme* of the *Sea*, for  
 more ease of prouision and such other  
*Domestique* notes.

Some againe may bee said to bee  
*Optical*? Such I meane as concerne the  
*Properties* of a well chosen *Prospect*:  
 which I will call the *Royaltie* of *Sight*.  
 For as there is a *Lordship* (as it were)  
 of the *Feete*, wherein the Master doth  
 much ioy when he walketh about the  
*Line* of his owne *Possessions*: So there  
 is a *Lordship* likewise of the *Eye* which  
 being a raunging, and Imperious, and  
 (I might say) an *usurping* *Sence*, can  
 indure no narrow *circumscription*; but  
 must be fedde, both with extent and  
 varietie. Yet on the other side, I finde  
 vaste and indefinite viewes which  
 drowne



drowne all apprehension of the vt-  
termost *Obiects*, condemned, by good  
Authors, as if thereby some part of the  
pleasure (whereof we speake) did pe-  
rish. Lastly, I remember a priuate  
*Caution*, which I know not well how  
to sort, vnlesse I should call it *Political*.  
By no meanes, to build too neere a  
great *Neighbour*; which were in truth  
to bee as vnfortunately seated on the  
earth, as *Mercurie* is in the Heauens, for  
the most part, euer in *combustion*, or ob-  
*scuritie*, vnder brighter beames then his  
owne.

From these seuerall *Knowledges* as I  
haue said, and perhaps from some o-  
ther doe *Architects* deriue their Do-  
ctrine about election of *Seats*: wherin  
I haue not beene so seuerer, as a great  
Scholer of our time, who precisely re-  
strayneth a perfect *Scituation*, at least for  
the maine point of health, *Ad locum*  
*contra quem Sol radios suos fundit cum sub*  
*Ariete oritur*, That is, in a word hee

\* Ioannes  
Heurnius  
Instit: Me-  
dicin: lib. 7.  
cap. 2.



would haue the first *salutation* of the Spring. But such *Notes* as these, where-  
foeuer we finde them in graue or slight  
Authors, are to my conceite rather  
*wishes* then *Precepts*; and in that quali-  
tie, I will passe them ouer. Yet I must  
withall say that in the *seating* of our  
selues (which as a kinde of *Marriage*  
to a *Place*). *Builders* should bee as cir-  
cumspect as *Wooers*; lest when all is  
done that *Doom* befall vs, which our  
Master doth lay vpon *Mitylene*: A  
*Towne* in truth (saith hee) *finely built,*  
*but foolishly planted.* And so much  
touching that, which I termed the *To-  
tall Posture.*

*Opidum  
quidem  
adificatum  
elegant  
sed impru-  
denter  
positum.*

The next in Order is the placing of  
the *Parts*; About which (to leaue as  
little as I may in my present labour,  
vnto *Fancie*, which is wilde and irregu-  
lar) I will propound a Rule of mine  
owne Collection, vpon which I fell in  
this maner. I had noted, that all *Arte*  
was then in truest perfection, when it  
might



might bee reduced to some naturall Principle. For what are the most iudicious *Artisans* but the *Mimiques* of *Nature*? This led me to contemplate the Fabrique of our owne Bodies, wherein the *Higb Architect* of the world, had displaied such skill, as did stupifie, all humane reason. There I found the *Hart* as the fountaine of Life, placed about the Middle, for the more equall communication of the vitall spirits. The *Eyes* seated aloft, that they might describe the greater Circle within their view. The *Armes* projected on each side, for ease of reaching. Briefly (not to loose our selues in this sweet speculation) it plainly appeareth, as a Maxime drawne from the Diuine light; That the *Place* of euery part, is to be determined by the *Vse*.

So then, from naturall *Structure*, to proceed to Artificiall; and in the rudest things, to preferue some *Image* of the excellentest. Let all the principall chambers



chambers of *Delight*, All *Studies* and *Libraries*, be towards the *East*: For the Morning is a friend to the *Muses*. All Offices that require heat, as *Kitchens*, *Stillatories*, *Stoues*, roomes for *Baking*, *Brewing*, *Washing*, or the like, would be *Meridionall*. All that need a coole and fresh temper, as *Cellers*, *Pantries*, *Batteries*, *Granaries*, to the *North*. To the same fidelikewise, all that are appointed for gentle Motion, as *Galleries*, especially in warme Climes, or that otherwise require a steadie and vnuariable light, as *Pinacothecia* (saith *Vitruuius*) by which he intendeth, (if I may guesse at his Greeke, as wee must doe often euen at his Latine) certaine *Repositories* for workes of rarity in Picture or other Arts, by the Italians called *Studioli*, which at any other Quarter, where the course of the *Sunne* doth diuersifie the *Shadowes*, would loose much of their grace. And by this Rule hauing alwayes regarde to the  
Use,



Use, any other Part may bee fitly accommodated.

I must here not omit to note that the Ancient *Grecians*, and the *Romanes* by their example in their buildings abroad, where the *Seat* was free, did almost Religiously scituate the *Front* of their houses, towards the South; perhaps that the Masters *Eye*, when hee came home, might not be dazeled; or that being illustrated, by the *Sunne*, it might yeeld the more gracefull *Aspect*; or some such reason. But from this, the Moderne *Italians* doe varie; whereof I shall speake more in another place. Let thus much suffice at the present for the *Position* of the severall *Members*, wherein must bee had as our Author doth often insinuate, and especially *lib. 6. cap. 10.* a singular regard, to the nature of the *Region*: Every Nation, being tyed aboue al Rules whatsoeuer, to a discretion, of prouiding against their owne *Inconueniences*: And there-

B

fore



fore a good *Parler* in *Ægypt* would perchance make a good *Celler* in *England*.

There now followeth the second Branch of the generall *Section* touching the *Worke*.

In the *Worke*, I will first confider the principall parts, and afterwards the Accessorie, or *Ornaments*; And in the Principall, first the Preparation of the *Materials*, and then the Disposition, which is the *Forme*.

Now, concerning the *Materiall* part; Although surely, it cannot disgrace an *Architect*, which doth so well become a Philosopher, to looke into the properties of *Stone* and *Wood*: as that Firre Trees, Cypresses, Cedars, and such other *Aereall* aspiring *Plants*, being by a kinde of naturall rigour (which in a Man I would call pride) inflexible downewards are thereby fittest for *Posts* or *Pillars* or such vpright vsc; that



## of Architecture.

II

on the other side, Oake, and the like true hartie Timber being strong in all positions, may bee better trusted in crosse and traaverse worke, for *Summers*, or guirding and binding *beames*, as they tearme them. And so likewise to obserue of *Stone*, that some, are better within, and other to beare *Weather*: Nay, to descend lower euen to examine *Sand* and *Lyme*, and *Clay* (of all which things *Vitruuius* hath discoursed, without any daintines, & the most of new Writers) I say though the *Speculative* part of such knowledge be *liberall*: yet to redeeme this Profession, and my present paynes, from indignitie; I must heere remember that to choose and sort the *materials*, for euery part of the *Fabrique*, is a Dutie more proper to a second *Superintendent*, ouer all the *Vnder Artisans* called (as I take it) by our Author, *Officinator lib. 6. cap. 11.* and in that Place expressely distinguished, from the *Architect*, whose glory doth



more consist, in the Designement and *Idea* of the whole *Worke*, and his truest ambition should be to make the *Forme*, which is the nobler Part (as it were) triumph over the *Matter*: whereof I cannot but mention by the way, a foreigne Paterne, namely the Church of *Santa Giustina* in *Padoua*: In truth a sound piece of good Art, where the *Materials* being but ordinarie stone, without any garnishment of sculpture, doe yet ravish the Beholder, (and hee knowes not how) by a secret *Harmony* in the *Proportions*. And this indeede is that end, at which in some degree, we should ayme euen in the priuatest workes: whereunto though I make haste, yet let me first collect, a few of the least triuiall cautions, belonging to the *Materiall Prouision*.

*Leon Batista Alberti*, is so curious, as to wish all the *Timber*, cut out of the same *Forrest*, and al the *Stone*, out of the same *Quarrie*.

*Philibert*



*Philibert del'Orme* the French Architect goes yet somewhat further, and would haue the *Lyme* made of the very same *Stone*, which wee intend to imploy in the *Worke*; as belike imagining that they will sympathize and ioyne the better, by a kinde of *Originall* kindred. But such conceits as these seeme somewhat too fine among this *Rubbage*, though I doe not produce them in sport. For surely the like agreements of nature, may haue oftentimes a discreet application to Art. Alwayes it must be confessed, that to make *Lyme* without any great choyce of refuse stufte, as we commonly do, is an *English* error, of no small moment in our Buildings. Whereas the *Italians* at this day, and much more the *Ancients* did burne their firmest *stone*, and euen fragments of *Marble* where it was copious, which in time became almost *Marble* againe, or at least of indissoluble duritie, as appeareth in the standing *Thea-*



ters. I must here not omit, while I am speaking of this part, a certain forme of *Bricke* described by *Daniele Barbaro Patriarch* of *Aquileia*, in the largest Edition of his Commentary vpon *Vitruuius*. The Figure triangular, euery side a foot long, and some inch and a halfe thicke, which he doth commend vnto vs for many good conditions: As that they are more commodious in the management, of lesse expence, of fayrer show, adding much beautie & strength to the *Murall Angles*, where they fall gracefully into an indented *Worke*: so as I should wonder that wee haue not taken them into vse, being propounded by a man of good authoritie in this knowledge; but that all Nations doe start at *Nouelties*, and are indeede married to their owne *Moulds*. Into this place might aptly fall a doubt, which some haue wel moued; whether the ancient *Italians* did burne their *Bricke* or no; which a passage or two in *Vitruuius* hath



hath left ambiguous. Surely where the *Naturall* heat is strong enough, to supply the *Artificiall*, it were but a curious folly to multiply both *Labour* and *Expence*. And it is besides very probable, that those *Materials* with a kindly and temperate heate would proue fairer, smother, and lesse distorted, then with a violent: Onely, they suffer two exceptions. First, that by such a gentle drying much time will bee lost which might otherwise bee employed in compiling. Next, That they will want a certaine sucking and soaking *Thirstinesse*, or a fiery appetite to drinke in the *Lime*, which must knit the *Fabrique*. But this question may be confined to the *South*, where there is more Sunne and patience. I will therefore not hinder my course, with this incident scruple, but close that part which I haue now in hand, about the *Materialls*, with a principall

B 4                      caution:



caution: That sufficient *Stuffe* and *Money* bee euer ready before we beginne: For when wee build now a piece, and then another by *Fits*, the *Worke* dries and sinkes vnequally, whereby the *Walles* growe full of *Chinques*, and *Crevices*; Therefore such pawfings are well reprooued by *Palladio*, lib. 1. cap. 1. and by all other. And so hauing gleaned these few remembrances, touching the preparation of the *Matter*, I may now proceede to the *Disposition* thereof, which must forme the *Worke*. In the *Forme*, as I did in the *Seate*, I will first consider the generall *Figuration*, and then the seuerall *Members*.

*Figures* are either *simple* or *Mixed*. The simple be either *Circular* or *Angular*. And of *Circular*, either *Compleate*, or *Deficient*, as *Ouals*, with which kindes I will bee contented, though the *Distribution* might bee more curious.

Now



Now the exact *Circle* is in truth a Figure, which for our purpose hath many fit and eminent properties; as fitnessse, for Commodity and Receit, being the most capable; fitnessse for strength and duration, being the most vnited in his parts; Fitnessse for beautie and delight, as imitating the celestiall *Orbes*, and the vniuersall *Forme*. And it seemes, besides, to haue the approbation of *Nature*, when shee worketh by *Instinct*, which is her secret Schoole: For birds doe build their nests *Spherically*: But notwithstanding these Attributes, it is in truth a very vnprofitable Figure in priuate *Fabriques*, as being of allover the most chargeable, and much roome lost in the bending of the *Walles*, when it comes to bee diuided: besides an ill distribution of light, except from the *Center* of the *Roofe*. So as anciently it was not vsual, saue in their *Temples* and *Amphi-Theaters*, which needed no

C

Com-



Compartitions. The *Ouals* and other imperfect circular *Formes*, haue the same exceptions, and lesse benefite of capacity: So as there remaynes to be considered in this generall survey of *Figures*, the *Angular*, and the *Mixed* of both. Touching the *Angular*, it may perchance sound somewhat strangely, but it is a true obseruation, that this *Art* doth neither loue many *Angles* nor few. For first, the *Triangle* which hath the fewest sides and corners, is of all other the most condemned, as being indeed both incapable and infirme (wherof the reason shall be afterwards rendred) and likewise vnresoluable into any other regular *Forme* then it selfe, in the inward *Partitions*.

As for *Figures* of five, six, seuen, or more *Angles*; They are surely fitter for *Militar Architecture*, where the Bulworks may be layed out at the *Corners*, and the sides serue for *Curtaines*, then for ciuill vse; though I am not ignorant



rant of that famous Piece at *Caprarola*, belonging to the houſe of *Farneſe*, caſt by *Baroccio* into the forme of a *Pentagone*, with a *Circle* inſcribed, where the *Architeſt* did ingeniouſly wreſtle with diuers inconueniencies in diſpoſing of the *Lights*, and in ſauing the vacuities. But as deſignes of ſuch nature doe more ayme at *Rarity*, then *Commoditie*: ſo for my part I had rather admire them, then commend them.

Theſe things conſidered, we are both by the *Precepts* and by the *Practiſe* of the beſt Builders, to reſolue vpon *Reſtangular Squares*, as a meane betweene too few, and too many Angles; and through the equall inclination of the ſides (which make the right Angle) ſtronger then the *Rhombe*, or *Loſenge*, or any other irregular *Square*. But whether the exact *Quadrat*, or the long *Square* be the better, I finde not well determined, though in mine



owne conceit I must preferre the latter; provided that the *Length* doe not exceede the *Latitude* aboue one third part, which would diminish the beauty of the *Aspect*, as shall appeare when I come to speake of *Symmetry* and *Proportion*.

Of mixed Figures, partly *Circular*, and partly *Angular*, I shall neede to say nothing; because hauing handled the simple already, the mixed according to their composition, doe participate of the same respects. Onely against these, there is a proper *Obiection*, that they offend *Uniformity*: Whereof I am therefore opportunely induced to say somewhat, as farre as shal concerne the outward *Aspect*, which is now in Discourse.

In *Architecture*, there may seem to be two opposite affectations, *Uniformitie* and *Varietie*, which yet will very well suffer a good recócillement, as we may see in the great *Patterne* of *Nature*, to which



which I must often resort: For surely there can be no *Structure*, more vni-forme, then our *Bodies* in the whole *Figuration*: Each side, agreeing with the other, both in the number, in the qualitie, and in the measure of the Parts: And yet some are round, as the *Armes*, some flat, as the *Hands*, some prominent, and some more retired: So as vpon the Mater, wee see that *Diuersitie* doth not destroy *Vniformitie*, and that the Limmes of a noble *Fabrique*, may bee correspondent enough, though they be various; Prouided alwayes, that we doe not runne into certaine extravagant Inuentions, whereof I shall speake more largely, when I come to the parting and casting of the whole *Worke*. We ought likewise to auoyde Enormous heights of fixe or seuen *Stories*, as well as irregular *Formes*; and the contrary fault of low-distended *Fronts*, is as vnseemely: Or againe, when the *Face* of the Building, is nar-



row and the *Flank* deepe; To all which extreames, some particular Nations, or Townes, are subiect, whose Names may be ciuilly spared: And so much for the generall *Figuration*, or *Aspect* of the *Worke*.

Now concerning the Parts in Seueraltie. All the parts of euery *Fabrique*, may be comprised vnder fiue Heads, which Diuision I receiue from *Batista Alberti*, to doe him right. And they be these.

The *Foundation*.

The *Walles*.

The *Appertions* or *Ouertures*.

The *Compartition*.

And the *Couer*.

About all which I purpose to gather the principall Cautions, and as I passe along, I will touch also the naturall Reasons of *Art*, that my discourse may be the lesse *Mechanicall*.

First then concerning the *Foundation*, which requireth the exactest care; For  
if



if that happen to dance, it will marre all the mirth in the House: Therefore, that wee may found our Habitation firmly, we must first examine the *Bed of Earth* (as I may tearme it,) vpon which we will Build; and then the vnderfillings, or *Substruction*, as the Ancients did call it: For the former, we haue a generall precept in *Vitruuius* twice precisely repeated by him, as a point indeed of mayne consequence, first *lib. 1. cap. 5.* And againe more fitly *lib. 3. cap. 3.* in these words as *Philander* doth well correct the vulgar Copies.

*Substructionis Foundationes fodiantur* (saith he) *si queant inueniri ad solidum, & in solido.* By which words I conceiue him to commend vnto vs, not onely, a diligent, but euen a iealous examination what the *Soile* will beare: aduising vs, not to rest vpon any appearing *Soliditie*, vnlesse the whole *Mould* through which wee cut, haue likewise beene *solid*; But how deepe wee should goe  
in



*Underdig-  
ing, or Hol-  
lowing of  
the Earth.*

in this search, hee hath no where to my remembrance determined, as perhaps depending more vpon *Discretion*, then *Regularitie*, according to the weight of the *Worke*; yet *Andrea Palladio* hath fairely aduentured to reduce it into Rule: Allowing for that *Ca-uazione* (as he calleth it) a sixt part of the height of the whole *Fabrique*, vnles the Cellers be vnder ground, in which case hee would haue vs, (as it should seeme) to found somewhat lower.

Some *Italians* doe prescribe, that when they haue chosen the *Floore*, or Plot, and laid out the Limits of the *Worke*, wee should first of all Digge *Wels* and *Cesternes*, and other vnder-conducts and conueiances, for the *Suillage* of the House, whence may arise a double benefit, for both the Nature of the *Mould* or *Soile*, would thereby be safely searched, and moreouer those open vents, will serue to discharge such *Vapours*, as hauing otherwise no issue might



might peradventure shake the Building. This is enough for the naturall *Grounding*, which though it bee not a part of the solid *Fabrique*, yet here was the fittest place to handle it.

There followeth the *Substruction*, or Ground-worke of the whole *Edifice*, which must sustaine the *Walles*; and this is a kinde of *Artificiall* foundation, as the other was *Natural*. About which these are the chiefe Remembrances. First, that the bottome be precisely leuell, where the *Italians* therefore commonly lay a platforme of good Bord; Then that the lowest *Ledge* or *Row* be meerely of *Stone*, and the broader the better, closely layd without *Morter*, which is a generall caution for all parts in Building, that are contiguous to *Bord* or *Timber*, because *Lime* and *Wood* are insociable, and if any where vnfit confiners, then most especially in the *Foundation*. Thirdly, that the bredth of the *Substruction* bee at least  
D double



double to the *insistent Wall*, and more or lesse, as the weight of the *Fabrique* shall require; for as I must againe re-  
 peate, *Discretion* may be freer then *Art*. Lastly, I finde in some a curious pre-  
 cept, that the *Materials* below, be layd as they grew in the *Quarrie*, supposing them belike to haue most strength in their *Naturall* and *Habituall* Posture. For as *Philippe de l'Orme* obserueth, the breaking or yeelding of a stone in this part, but the bredth of the backe of a knife, will make a *Cleft* of more then half a foot in the *Fabrique* aloft, So important are *Fundamentall errors*. Among which notes I haue sayd nothing of *Pallification*, or *Pyling* of the *Ground-plot*, commanded by *Vitruuius*, when we build vpon a moist or marshy soile, because that were an error in the first choyce. And therefore all *Seats* that must vse such prouision below (as *Venice* for an eminent example) would perhaps vpon good enquiry, be found  
 oldrob  
 to



to haue beene at first chosen by the counsell of *Necessity*.

Now the *Foundation* being searched, and the *Substruction* layd, wee must next speake of the *Wals*.

*Wals* are either entire and continuall, or intermitted; and the *Intermissions* be either *Pillars* or *Pylasters*; for here I had rather handle them, then as some others doe, among *Ornaments*.

The entire *Muring* is by Writers diuersly distinguished: By some, according to the quality of the *Materials*, as either Stone or Brick, &c. where, by the way, let me note, that to build *Wals* and greater Workes of *Flint*, whereof wee want not example in our *Iland*, & particularly in the *Prouince* of *Kent*, was (as I conceiue) meerly vnkown to the *Ancients*, who obseruing in that *Materiall*, a kinde of *Metalllicall* Nature, or at least a *Fusibility*, seeme to haue resolued it into nobler vse; an Art now vtterly lost, or perchance kept vp by a few *Chymicks*.



*micks.* Some againe doe not so much consider the quality, as the *Position* of the sayd *Materials*: As when Bricke or squared stones are laid in their lengths with sides and heads together, or their points conjoynd like a *Networke* (for so *Vitruuius* doth call it *reticulatum opus*) of familiar vse (as it should seeme) in his Age, though afterwards growne out of request, euen perhaps for that subtile speculation which hee himselfe toucheth; because so layd, they are more apt in swagging down, to pierce with their points, then in the iacent Posture, and so to creuice the *Wall*: But to leaue such cares to the meaner Artificers, the more essentiall are these.

That the *Walles* bee most exactly perpendicular to the *Ground-worke*: for the right *Angle* (thereon depending) is the true cause of all *Stability*; both in Artificiall and Naturall positions; A man likewise standing firmest,



meft, when he ftands vprighteft. That the maffieft and heauieft *Materials* bee the loweft, as fitter to beare, then to be borne. That the *Worke* as it rifeth, diminifh in *thickneffe* proportionally, for eafe both of weight, and of expence. That certaine courfes or *Ledges* of more ftrength then the reft, be interlayed like *Bones*, to fuftaine the *Fabrique* from totall ruine, if the vnder parts fhould decay. Laftly, that the *Angles* bee firmly bound, which are the *Nerues* of the whole *Edifice*, and therefore are commonly fortified by the *Italians*, euen in their Bricke buildings, on each fide of the corners, with well fquared ftone, yeelding both ftrength and grace And fo much touching the entire or folid *Wall*.

The intermiffions (as hath beene fayd) are either by *Pillars*, or *Pylafters*.

*Pillers* which we may likewise call *Columnes* (for the word among Artificers is almoft naturallized) I could



distinguish into *Simple & Compounded*. But (to tread the beaten and plainest way) there are five *Orders* of Pillers, according to their dignity and perfection, thus marshalled:

The *Tuscan*.

The *Dorique*.

The *Ionique*.

The *Corinthian*.

And the *Compound Order*, or as some call it the *Roman*, others more generally the *Italian*.

In which five *Orders* I will first consider their *Communities*, and then their *Proprieties*.

Their *Communities* (as farre as I obserue) are principally three. First, they are all *Round*; for though some conceiue *Columna Atticurgues* mentioned by *Vitruuius*, lib. 3. cap. 3. to haue beene a squared Pillar, yet wee must passe it o-uer as irregular, neuer receiued among these *Orders*, no more then certaine other licentious inuentions, of *Wrea-  
thed*,



thed, and Vined, and Figured Columnnes, which our Author himselfe condemneth, being in his whole Booke a professed enemy to *Fancies*.

Secondly, they are all *Diminished*, or *Contracted* insensibly, more or lesse, according to the proportion of their heights, from one third part of the whole *Shaft* vpwards, which *Philander* doth prescribe by his owne precise measuring of the Ancieut remainders, as the most gracefull *Diminution*. And here I must take leaue to blame a practice growne ( I know not how) in certaine places too familiar, of making *Pillars* swell in the middle, as if they were sicke of some *Tympany*, or *Drop-sie*, without any Authentique Paternie or Rule, to my knowledge, and vnseemely to the very iudgement of sight. True it is that in *Vitruuius*, lib. 3. cap. 2. wee finde these words, *De adiectione, quæ adijcitur in medijs Columnis, quæ apud Grecos* <sup>ἐπίπλεσι</sup> *appellatur, in extremo*



*ultimo libro erit formatio eius*; which passage, seemeth to haue giuen some countenance to this error. But of the promise there made, as of diuerse other elsewhere, our Master hath fayled vs, either by slip of uemory, or iniury of time, and so wee are left in the darke. Alwayes sure I am, that besides the authority of example which it wanteth, It is likewise contrary to the Originall and Naturall Type, in *Trees*, which at first was imitated in *Pillars*, as *Vitruuius* himselfe obserueth, *lib. 5. cap. 1.* For who euer saw any *Cypresse*, or *Pine*, (which are there alledged) small below and aboue, and tumerous in the middle, vnlesse it were some diseased Plant, as Nature (though otherwisethe comliest *Mistresse*) hath now and then her deformities and *Irregularities*.

Thirdly, they haue all their *Vnder-  
settings*, or *Pedistals*, in height a third part of the whole *Columnne*, comprehending the *Base* and *Capitall*; and their  
vpper



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upper Adjuncts, as *Architraue*, *Frize*, and *Cornice*, a fourth part of the sayd Pillar ; which rule of singular vse and facility I find settled by *Iacobo Baroccio*, and hold him a more credible Author, as a man that most intended this piece, then any that vary from him in those *Dimensions*.

These are their most considerable *Communities* and agreements.

Their *Proprieties* or *Distinctions* will best appeare by some reasonable description of them all, together with their *Architraues*, *Frizes*, and *Cornices*, as they are vsually handled.

First therefore the *Tuscan* is a plain, massie, rurall Pillar, resembling some sturdy well-limmed Labourer, homely clad, in which kinde of comparisons *Vitruuius* himselfe seemeth to take pleasure, *lib. 4. cap. 1.* The length thereof shall be six *Diameters*, of the grossest of the Pillar below. Of all proportions, in truth, the most naturall ; For our

E

Author



Author tells vs, *lib. 3. cap. 1.* that the foote of a man is the fixt part of his bodie in ordinary measure, and *Man* himfelfe, according to the faying of *Protagoras* (which *Aristotle* doth fome-where vouchsafe to celebrate) is τὸ πρῶτον ἀπαιτῶν γενέσθαι μέτρον: as it were the *Proto-type* of all exact *Symmetrie*, which we haue had other occasion to touch before: This *Columnne* I haue by good warrant called *Rurall*, *Vitru. cap. 2. lib. 3.* And therefore we need not confider his rank among the reft. The distance or *Intercolumniation* (which word Artificers doe vsually borrow) may bee neere foure of his owne *Diameters*, because the *Materials* commonly layd ouer this Pillar, were rather of wood then stone; through the lightnesse whereof the *Architraue* could not fuffer, though thinnely supported, nor the *Columnne* it felfe being fo substantiall. The *Contraction* aloft fhall be (according to the moft receiued practice)



rice) one fourth part of his thicknesse below. To conclude, (for I intend only as much as shall serue for a due Distinguishment, and not to delineate every petty member) the *Tuscan* is of all the rudest Pillar, and his principall Character *Simplicity*.

The *Dorique Order* is the grauest that hath beene receiued into ciuill vse, preserving, in comparison of those that follow, a more *Masculine Aspect*, and litle trimmer then the *Tuscan* that went before, saue a sober garnishment now and then of *Lions heads* in the *Cornice*, and of *Triglyphs* and *Metopes* alwayes in the *Frize*. Sometimes likewise, but rarely, chaneled, and a litle slight sculpture about the *Hypotrachelion*, or *Necke* vnder the *Capitall*. The length, seuen *Diameters*. His ranke or degree, is the lowest by all *Congruity*, as being more massie then the other three, and consequently abler to support. The *Intercolumniation*, thrice as

E. 2.

much



much as his thicknesse below. The *Contraction* aloft, one fift of the same measure. To discerne him, will bee a peece rather of good *Heraldry*, then of *Architecture*: For he is best knowne by his place, when he is in company, and by the peculiar ornament of his *Frize* (before mentioned) when he is alone.

The *Ionique Order* doth represent a kinde of Feminine slendernesse, yet saith *Vitruuius*, not like a light Housewife, but in a decent dressing, hath much of the *Matrone*. The length eight *Diameters*. In degree as in substantialnesse, next aboue the *Dorique*, sustayning the third, and adorning the second Story. The *Intercolumniation* two of his owne *Diameters*. The *Contraction* one sixt part. Best knowne by his trimmings, for the bodie of this *Columnne* is perpetually chaneled, like a thicke plighted Gowne. The *Capitall* dressed on each side, not much vnlike womens Wires, in a spirall wreathing



thing, which they call the *Ionian Voluta*. The *Cornice* indented. The *Frize* swelling like a pillow; And therefore by *Vitruvius*, not vnelegantly tearmed *Puluinata*. These are his best Characters.

The *Corinthian*, is a *Columnne*, laciuiously decked like a Curtezane, and therein much participating (as all Inventions doe) of the place where they were first borne: *Corinthe* hauing been without controuersie one of the wantonest Townes in the world. This Order is of nine *Diameters*. His degree, one Stage aboue the *Ionique*, and alwaies the highest of the simple Orders. The *Intercolumniation* two of his *Diameters*, and a fourth part more, which is of all other the comeliest distance. The *Contraction* one seuenth Part. In the *Cornice* both *Dentelli* and *Modigliani*. The *Frize*, adorned with all kinds of *Figures* and various Compartments at Pleasure. The *Capitall*, cut into the

Our Artizans call them Teeth and Carrouzels.

beau-



beautifullest leafe, that Nature doth yeeld, which surely next the *Aconitum Pardalianches* ( reiected perchance as an ominous Plant ) is the *Acanthus* or *Branca Vrsina* though *Vitruuius* doe impute the choice thereof vnto Chance, and wee must be contented to belecue him : In short, As Plainenesse did Characterize the *Tuscan*, so must *Delicacie* and *Varietie* the *Corinthian* Pillar, besides the height of his Ranke.

The last is the *Compounded Order*: His name being a brieve of his Nature. For this Pillar is nothing in effect, but a *Medlie*, or an *Amasse* of all the precedent *Ornaments*, making a new kinde, by stealth, and though the most richly tricked, yet the poorest in this, that he is a borrower of all his Beautie. His length, ( that he may haue somewhat of his owne ) shalbe of ten *Diameters*. His degree should, no doubt, bee the highest by reasons before yeelded.

But



But few *Palaces* Auncient or Moderne exceede the third of the *Ciuill Orders*. The *Intercolumniation*, but a *Diameter* and an halfe, or alwayes somewhat lesse then two. The *Contraction* of this Pillar must be one eight Part lesse aboue then belowe. To know him will be easie by the veriemixture of his *Ornaments*, and *Cloathing*.

And so much touching the five *Orders* of *Columnes*, which I will conclude with two or three, not impertinent *Cautions*:

First, that where more of these *Orders* then one, shalbe set in seuerall *Stories* or *Contignations*, there must bee an exquisite care, to place the *Columnes* precisely, one ouer another, that so, the *solid* may answere to the *solid*, and the *vacuities* to the *vacuities*, as well for *Beautie*, as strength of the *Fabrique*: And by this Caution the Consequence is plaine, that when wee speake of the *Intercolumniation* or *distance*, which is due



due to each *Order*, we meane in a *Doricque*, *Ionically*, *Corinthian Porch*, or *Cloister*, or the like of one *Contignation*, and not in *Storied buildings*.

Secondly, let the *Columnes* aboue be a forth part lesse then those below, saith *Vitruuius*, *lib. 5. cap. 1.* A strange Precept, in my opinion, and so strange, that peraduenture it were more suitable, euen to his owne Principles, to make them rather a fourth Part greater, For *lib. 3. cap. 2.* where our Master handleth the *Contractions* of Pillars, wee haue an *Optique Rule*, that the higher they are, the lesse should be alwayes their diminution aloft, because the *Eye* it selfe, doth naturally contract all *Obiects* more or lesse, according to the *Distance*; which consideration, may, at first sight, seeme to haue beene forgotten in the Caution wee haue now giuen; but *Vitruuius* (the best Interpreter of himselfe) hath in the same place of his fift Booke, well acquitted his



his memorie by these words: *Columnæ superiores quarta parte minores, quàm inferiores, sunt constituendæ; propterea quòd, operi ferendo quæ sunt inferiora, firmitiora esse debent*; preferring like a wise Mechanick, the naturall Reason, before the Mathematicall, and sensible conceits before abstracted. And yet lib. 4. cap. 4. he seemeth againe, to affect Subtilltie, allowing pillars the more they are channeled, to be the more slender; because while our Eye (saith hee) doth as it were distinctly measure, the eminent and the hollowed Parts, the Totall Object appeareth the bigger, and so as much as those excauations, doe subtract, is supplied by a Fallacie of the Sight: But here mee thinks, our Master should likewise haue rather considered, the naturall Inconuenience; for though Pillars by chaneling, bee seemingly ingrossed to our Sight, yet they are truely weakened in themselves; and therefore ought perchance



in sound reason not to bee the more slender, but the more Corpulent, vnlesse apparances preponder truths, but *Contra Magistrum, non est disputandum.*

A third Caution shalbe that all the *proiected* or *lutting* Parts (as they are termed) be very moderate, especially, the *Cornices* of the lower *Orders*, for whilest some thinke to giue them, a beautifull and royall Aspect, by their largenesse, they sometimes hinder both the Light within, (whereof I shall speake more in due place) and likewise detract much from the viewe of the *Front* without, as well appeareth in one of the principall Fabriques at *Venice*, namely the Palace, of the Duke *Grimani* on the *Canal Grande*, which by this magnificent error, is somewhat disgraced: I neede now say no more concerning *Columnes* & their *Adiuncts*, about which Architects make such a noyse in their Bookes, as if the very termes of *Architraues*, and *Frizes*,  
and



and *Cornices*, and the like, were enough to graduate a Master of this *Art*; yet let me before I passe to other matter, preuent a familiar Obiection; It will perchance bee said, that all this Doctrin touching the five Orders, were fitter for the *Quarries* of *Asia* which yeelded 127 *Columnes* of 60 *Foot* high, to the *Ephesian Temple*, or for *Numidia* where *Marbles* abound; then for the *Spirits* of *England*, who must be contented with more ignoble *Materials*: To which I answer, that this neede not discourage vs: For I haue often at *Venice* viewed with much pleasure, an *Atrium Græcum* (we may translate it an *Anti porch*, after the Greeke manner) raised by *Andrea Palladio*, vpon eight *Columnes* of the *Compounded Order*; The *Bases* of Stone, without *Pedistals*, The *shafts* or *Bodies*, of meere Brick; three foote and an halfe thicke in the *Diameter* below, and consequently thirty five foote high, as



himselfe hath described them in his second Booke; Then which, mine Eye, hath neuer yet beheld any *Columnes*, more stately of Stone or Marble; For the Bricks, hauing first beene formed in a *Circular Mould*, and then cut before their burning into foure quarters or more, the sides afterwards ioyne so closely, and the points concenter so exactly, that the *Pillars* appeare one entire *Peece*; which short description, I could not omit, that thereby may appeare, how in truth wee want rather *Art* then *stufte*, to satisfie our greatest *Fancies*.

After *Pillars*, the next in my distribution, are *Pylasters*, mentioned by *Vitruuius*, lib. 5. cap. 1. and scant any where else vnder the name of *Parastates*, as *Philander* conceiueth, which *Grammaticall* point (though perchance not very cleere) I am contented to examine no farther. Alwayes, what we meane by the thing it selfe, is plaine enough



enough in our owne vulgar; Touching which, I will briefly collect the most considerable notes.

*Pylasters*, must not bee too tall and slender, least they resemble *Pillars*, nor too *Dwarfish* and grosse, least they imitate the *Piles* or *Peeres* of Bridges: Smoothnesse doth not so naturally become them, as a Rusticke *Superficies*, for they ayme more at *State & Srength*, then *Elegancie*. In priuate Buildings they ought not to be narrower, then one Third, nor broader then two parts of the whole Vacuity, betweene *Pylaster* and *Pylaster*; but to those that stand at the *Corners*, may be allowed a little more Latitude by discretion, for strength of the *Angles*: In *Theaters* and *Amphi-theaters*, and such weighty Workes, *Palladio* obserueth them, to haue beene as broad as the halfe, and now and then as the whole *Vacuitie*: Hee noteth likewise (and others consent with him) that their



true *Proportion*, should bee an *exact Square*; But for lessening of expence, and enlarging of roome, they are commonly narrower in *Flanke*, then in *Front*: Their principall *Grace* doth consist in halfe or whole *Pillars*, applied vnto them; in which case it is well noted by Authors, that the *Columns* may bee allowed somewhat above their ordinary length, because they leane vnto so good *Supporters*. And thus much shall suffice touching *Pilasters*, which is a cheape, & a strong, and a noble kinde of *Structure*.

Now because they are oftner, both for Beauty and Maiesty, found *Arched*, then otherwise; I am heere orderly led to speake of *Arches*, and vnder the same head of *Vaults*: for an *Arch* is nothing indeed but a contracted *Vault*, and a *Vault* is but a dilated *Arch*: Therefore to handle this Piece both compendiously, and fundamentally, I will resolute the whole businesse into a few *Theoremes*. The-



Theoreme 1.

All solid *Materials* free from impediment, doe descend *perpendicularly* downewards, because *ponderosity* is a naturall inclination to the *Center* of the World, and *Nature* performeth her motions by the shortest lines.

Theoreme 2.

Brickes moulded in their ordinary *Rectangular* forme, if they shall be layd one by another in a leuell row, betweene any Supporters sustayning the two ends, then all the pieces between, will necessarily sinke, euen by their owne naturall *Gravity*, and much more if they suffer any depression by other waight aboue them, because their sides being *parallell*, they haue roome to descend *perpendicularly*, without impeachment, according to the former *Theoreme*; Therefore to make them stand, wee must either change their *Posture*, or their *Figure*, or both.

If



*Theorme 3.*

If Bricks moulded, or Stones squared *Cuncatim* (that is, *Wedge wise*, broader above then below) shall be layd in a *Row leuell*, with their ends supported, as in the precedent *Theoreme*, pointing all to one *Center*; then none of the pieces betweene can sinke till the *Supporters* giue way, because they want roome in that *Figuration*, to descend *perpendicularly*. But this is yet a weake piece of *Structure*, because the *Supporters* are subiect to much impulsion, especially if the line be long; for which reason this *Forme* is seldome vsed, but ouer *Windowes*, or narrowe *Doores*. Therefore to fortifie the *Work* as in this third *Theoreme* wee haue supposed the *Figure* of all the *Materials* different from those in the second: So likewise wee must now change the *Posture*, as will appeare in the *Theoreme* following.

*Theoreme 4.*

If the *Materials* figured as before  
*Wedge-*



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*Wedge-wise*, shall not be disposed leuclly, but in forme of some *Arch*, or portion of a *Circle*, pointing all to the same *Center*: In this case neither the pieces of the sayd *Arch*, can sinke downwards, through want of roome to descend\* perpendicularly: Nor the *Sup- By the first*  
*porters* or *Butments* (as they are tear- *Theor.*  
 med) of the sayd *Arch* can suffer so much violence, as in the precedent flat Posture, for the roundnesse will alwayes make the Incumbent waight, rather to rest vpon the *Supporters*, then to shoue them; whence may be drawn an euident *Corolary*; that the safest of all *Arches* is the *Semicircular*, and of all *which is*  
*Vaults* the *Hemisphere*, though not ab- *the sole*  
 solutely exempted from some naturall *prerogative*  
 weakenesse,\* as *Barnardino Baldi Abbot of perpen-*  
 of *Guastalla*, in his *Commentary vpon dicular*  
*Aristotles Mechaniques*, doth very well *lines and*  
 prooue; where let me note by the way, *right An-*  
 that when any thing is *Mathematically gles.*  
 demonstrated weake, it is much more



*Mechanically* weake: Errors euer occurring more easily in the management of *Grosse Materials*, then *Lineall Designs*.

*Theoreme 5.*

As Semicircular *Arches*, or Hemispherical *Vaults*, being raised vpon the totall *Diameter*, bee of all other the roundest, and consequently the securest, by the precedent *Theoreme*: So those are the gracefulest, which keeping precisely the same height, shall yet bee distended, one fourteenth part longer then the sayd entire *Diameter*; which addition of distent will conferre much to their *Beauty*, and detract but little from their *Strength*.

This obseruation I finde in *Leon-Batista Alberti*; ' But the practice how to preserve the same height, and yet distend the Armes or ends of the *Arch*, is in *Albert Durers Geometry*, who taught the *Italians* many an excellent *Line*, of great vse in this *Art*.

Vpon



Vpon these five *Theoremes*, all the skill of *Arching* and *Vaulting* is grounded: As for those *Arches*, which our Artizans call of the third and fourth point; And the *Tuscan* writers *di terzo*, and *di quarto acuto*; because they alwayes concurre in an acute *Angle*, and doe spring from diuision of the *Diameter*, into three, foure, or more parts at pleasure; I say, such as these, both for the naturall imbecility of the sharpe *Angle* it selfe, and likewise for their very *Vncomelinesse*, ought to bee exiled from judicious eyes, and left to their first inuentors, the *Gothes* or *Lumbards*, amongst other *Reliques* of that barbarous *Age*.

Thus of my first *Partition* of the parts of euery *Fabrique*, into five Heads, hauing gone through the two former, & been incidently carried into this last doctrine touching *Arches* and *Vaults*. The next now in order are the *Apertions*; vnder which tearme I



doe comprehend *Doores*, *Windowes*, *Staire-cases*, *Chimnies*, or other *Conducts*: In short, all *Inlets* or *Outlets*; To which belong two generall *Cautions*.

First, That they bee as few in number, and as moderate in Dimension, as may possibly consist with other due respects: for in a word, all *Openings* are *Weaknings*.

Secondly, That they doe not approach too neere the *Angles* of the *Wals*; for it were indeed a most essentiall *Solecisme* to weaken that part, which must strengthen all the rest: A precept well recorded, but ill practised by the *Italians* themselves, particularly at *Venice*, where I haue obserued diuerse *Pergoli*, or *Meniana* (as *Vitruuius* seemeth to call them, which are certaine ballised out-standings to satisfie curiosity of sight) very dangerously set forth, vpon the very point it selfe, of the *Murall Angle*.

Now,



Now, Albeit I make haste, to the casting and comparting of the whole *Worke*, (being indeede the very Definitive Summe of this *Art*, to distribute usefully and gracefully a well chosen *Plot*) yet I will first vnder their severall Heads, collect briefly some of the choicest notes, belonging to these particular *Ouertures*.

*Of Doores and Windows.*

THESE *In lets* of *Men* and of *Light*, I couple together, because I find their due Dimensions, brought vnder one Rule, by *Leone Alberti* (a learned Searcher) who from the Schoole of *Pythagoras* (where it was a fundamentall *Maxime*, that the *Images* of all things are latent in *Numbers*) doth determine the comeliest Proportion, betwene breadths and heights; Reducing *Symmetrie* to *Symphonie*, and the *harmonie* of *Sounde*, to a kinde of *harmonie* in *Sight*, after this manner: The two

G 3 principall



principall *Consonances*, that most ravish the Eare, are by consent of all Nature, the *fift*, and the *Octave*; whereof the first riseth radically, from the proportion, betweene *two* and *three*. The other from the double *Internalle*, betweene *One* and *Two*, or betweene *Two* and *Foure* &c. Now if we shall transport these proportions, from Audible to visible *Obiects*; and apply them as they shall fall fittest (the nature of the Place considered) Namely in some *Windowes*, and *Doores*, the *Symmetrie* of *Two* to *Three*, in their Breadth and Length; In others the double as aforesaid; There will indubitably result from either, a gracefull and *harmonious* contentment, to the Eye; Which speculation though it may appeare vnto vulgar *Artizans*, perhaps too subtile, and too sublime, yet we must remember, that *Vitruuius* himselfe doth determine many things in his profession; by *Musicall* grounds, and much commendeth



commendeth in an *Architect*, a *Philosophical* Spirit; that is, he would haue him (as I conceaue it) to be no superficiall, and floating *Artificer*; but a *Diuer* into *Causes*, and into the *Mysteries* of *Proportion*; Of the *Ornaments*, belonging both to *Doores* and *Windowes*, I shall speake in other place; But let mee heere adde one obseruation; That our *Master* (as appeareth by diuers passages, and particularly *lib. 6. cap. 9*) seemes to haue beene an extreame Louer of *Luminous Roomes*; And indeede I must confesse that a Franke Light, can misbecome noe *A Edifice* whatsoeuer, *Temples* onely excepted; which were anciently darke, as they are likewise at this day in some Proportion. *Deuotion* more requiring collected then defused Spirits. Yet on the other side we must take heede to make a House (though but for ciuill vse) all Eyes, like *Argus*; which in Northerne *Climes* would be too cold, In Southerne, too hot: And therefore the matter

*Lumen est  
diffusum  
sui & alieni.*



matter indeede importeth more then a merry comparison. Besides, There is no part of *Structure* either more expencefull, then *Windowes*; or more ruinous; not onely for that vulgar reason, as being exposed to all violence of weather; but because consisting of so different and vnsociable pieces, as *Wood, Iron, Leade, and Glasse*, and those small and weake, they are easily shaken; I must likewise remember one thing, (though it be but a *Grammatical* note) touching *Doores*. Some were *Fores*, & Some were *Valuae*. Those (as the very word may seeme to import) did open *outwards*, These *inwards*; And were commonly of two *Leaves* or *Panes*, (as we call them) thereby requiring indeed, a lesser *Circuit* in their *vnfoulding*; And therefore much in vse among *Italians* at this day; But I must charge them with an Imperfection, for though they let in as well as the former, yet they keepe our worse.

Of



Of Staire-cases.

**T**O make a compleate *Staire-case*, is a curious peece of *Architecture*: The vulgar Cautions are these.

That it haue a very liberall *Light*, against all Casualtie of *Slippes*, and *Falles*.

That the space aboue the *Head*, bee large and *Airy*, which the *Italians* vse to call *Vn bel-sfogolo*, as it were good *Ventilation*, because a man doth spend much breath in mounting.

That the *Halfe-paces* bee well distributed, at competent distances, for reposing on the way.

That to auoyd *Encounters*, and besides to gratifie the beholder, the whole *Staire-case* haue no niggard *Latitude*, that is, for the principall *Ascent*, at least ten foot in *Royall Buildings*.

That the breadth of euery single *Step* or *Staire* bee neuer lesse then one  
H                      foote,



foote, nor more then eighteen inches.

That they exceede by no meanes halfe a foot in their height or thicknesse; for our *Legges* doe labour more in *Elevation*, then in *Distention*: These I say are familiar remembrances, to which let me adde;

That the steps bee layd where they joyne *Con vn tantino di scarpa*; we may translate it somewhat *sloaping*, that so the foot may in a sort both ascend and descend together, which though obserued by few, is a secret and delicate deception of the paines in mounting.

Lastly, to reduce this doctrine to some *Naturall*, or at least *Mathematicall* ground, (our *Master*, as we see, *lib. 9. cap. 2.*) borroweth those proportions, that make the sides of a *Rectangular Triangle*, which the Ancient Schoole did expresse in lowest tearmes, by the numbers of 3. 4. and 5. That is, *Three* for the *Perpendicular*, from the *Staire-head* to the ground; *Foure* for the  
*Ground*



Ground-line it selfe, or *Recession* from the wall; And *Fiue* for the whole *Inclination* or slopenesse in the ascent, which proportion, saith he, will make *Temperatas graduum librationes*. Hitherto of *Staire-cases* which are direct: There are likewise *Spirall*, or *Cockle staires*, either *Circular*, or *Ouall*; and sometimes running about a *Pillar*, sometimes vacant, wherein *Palladio*, (A man in this point of singular felicity) was wont to diuide the *Diameter*, of the first sort into three parts, yeelding one to the *Pillar*, and two to the *Steps*; Of the second into foure, whereof he gaue two to the *Staires*, and two to the *Vacuitie*, which had all their light from aboue, And this in exact *Ouals*, is a Master-piece.

#### OF CHIMNIES.

IN the present businesse, *Italians* (who make very frugall fires, are perchance not the best Counsellors.) Therefore



from them we may better learne, both how to raise faire *Mantels* within the roomes, and how to disguise gracefully the shafts of *Chimnies* abroad (as they vse) in sundry formes (which I shall handle in the latter part of my labour) and the rest I will extract from *Philippe de l'Orme*: In this part of his *Worke* more diligent, then in any other, or, to doe him right, then any man else.

First, hee obserueth very soberly, that who in the disposition of any Building will consider the nature of the *Region*, and the *Windes* that ordinarily blow, from this, or that *Quarter*; might so cast the roomes, which shall most need fire; that hee should little feare the incommodity of *Smoake*, and therefore hee thinkes, that inconuenience, for the most part to proceede from some inconsiderate beginning. Or if the error lay not in the *Disposition* but in the *Structure* it selfe; then hee makes



makes a *Logicall* enquiry; That either the *Winde* is too much let in aboue, at the mouth of the *Shafte*, or the *Smoke* stifeled below; If none of these, Then there is a repulsion of the *Fume*, by some higher *Hill* or *Fabrique*, that shall ouertoppe the *Chimney* and worke the former effect: If likewise not this, Then he concludes, that the Roome which is infested, must bee necessarily both little and close, so as the smoke cannot issue by a naturall *Principle*, wanting a succession and supply of new *Ayre*.

Now, In these cases he suggesteth diuers Artificiall remedies; of which I will allow one, a little *Description*, because it sauoureth of *Philosophie*, and was touched by *Vitruuius* himselfe, *lib. 1 cap. 6.* but by this man ingeniously applied to the present vse: Hee will haue vs prouide two hollow *brasse Balles* of reasonable capacitie, with little holes open in both, for reception of

H 3 Water,



Water, when the Aire shalbe first sucked out; One of these wee must place with the hole vpwards, vpon an yron Wire, that shall trauerse the *Chimney*, a little aboue the *Mantell*, at the ordinary height of the sharpest heate or flames, whereof the water within being rarified, and by rarification resolued into *Winde*, will breake out, and so force vp the smoke, which otherwise might linger in the *Tunnell*, by the way, and oftentimes reuert; With the other, (saith he) wee may supply the place of the former, when it is exhausted, or for a neede blow the *Fire* in the meane while; Which Inuention I haue interposed for some little intertainment of the Reader; I will conclude with a note from *Palladio*, who obserueth that the *Ancients* did warme their Roomes, with certaine secret *Pipes* that came through the Walles, transporting heate (as I conceiue it) to sundry parts of the House, from one  
common



common *Furnace* ; I am ready to baptize them *Caliducts* , as well as they are tearmed *Venti-ducts* , and *Aquæ-ducts* that conuey Winde and Water; which whether it were a custome or a delicacie, was surely both for thrift , and for vse, far beyond the German *Stoues*; And I should preferre it likewise before our owne fashion, if the very sight of a fire, did not adde to the Roome a kinde of *Reputation*, \*as old *Homer* doth teach vs in a verse, sufficient to prooue that himsele was not blinde, as some would laie to his charge.

αἰδομένη δὲ πρὸς  
τὴν γέφυραν  
οἷός τις ἰδέσθαι.  
*Hom. Epig.*

Touching *Conducts* for the *Suillage* and other necessities of the House, (which how base soeuer in vse, yet for health of the Inhabitants, are as considerable, and perhaps more then the rest) I finde in our Authors, this Counsell; That *Art* should imitate *Nature*, in those ignoble conueyances ; and separate them from Sight, (where there wants a running Water ) into the most



most remote, and lowest, and thickest part of the *Foundation* : with secret vents passing vp through the Walles like a *Tunnell* to the wilde Aire aloft: which all Italian Artizans commend for the discharge of noysome vapours, though else-where to my knowledge little practised.

Thus hauing considered the precedent *Appertions*, or *Ouertures*, in seuerallie according to their particular Requisites, I am now come to the casting and *Contexture* of the whole *Worke*, comprehended vnder the tearme of *Compartition* : Into which ( being the mainest piece ) I cannot enter without a few generall Precautions, as I haue done in other Parts.

First therefore , Let no man that intendeth to build , settle his Fancie vpon a draught of the *Worke* in *paper*, how exactly soeuer measured, or neatly set off in *perspective*; And much lesse vpon a bare *Plant* thereof, as they call the  
the



the *Schiographia* or *Ground lines*; without a *Modell* or *Type* of the whole *Structure*, and of euey parcell and *Partition* in *Pastboord* or *Wood*.

Next that the laid *Modell* bee as plaine as may be, without colours or other beautifying, lest the pleasure of the *Eye* preoccupate the *Iudgement*; which aduise omitted by the *Italian Architects*, I finde in *Philippe de l'Orme*, and therefore (though *France* bee not the *Theater* of best Buildings) it did merit some mention of his name.

Lastly, the bigger that this *Type* be, it is still the better, not that I will perswade a man to such an enormity, as that *Modell* made by *Antonio Labaco*, of *Saint Peters Church* in *Rome*, containing 22. foot in length, 16. in breadth, and 13. in heighth, and costing 4184. crownes: The price in truth of a reasonable *Chappell*: Yet in a *Fabrique* of some 40. or 50. thousand pounds charge, I wish 30. pounds at least layd  
I out



out before hand in an exact *Modell*; for a little misery in the *Premises*, may easily breed some absurdity of greater charge, in the *Conclusion*.

Now, after these premonishments, I will come to the *Compartition* it selfe; By which, the Authors of this *Art* (as hath beene touched before) doe vnderstand, a *gracefull* and *usefull* distribution, of the whole *Ground-plot* both for roomes of *Office*, and of *Reception* or *Entertainment*, as farre as the *Capacity* thereof, and the nature of the *Coun-try* will comport. Which circumstances in the present *Subiect*, are all of maine consideration, and might yeeld more discourse then an *Elementall Rap-sodie* will permit. Therefore (to anatomize briefly this Definition) the *Gracefulnesse* (whereof wee speake) will consist in double *Analogie*, or correspondencie. First, between the *Parts* and the *Whole*, whereby a great *Fa-brique* should haue great *Partitions*, great  
Lights



Lights, great Entrances, great Pillars or Pylasters; In summe, all the Members great. The next betweene the Parts themselves, not only, considering their Breadths, and Lengths, as before, when wee spake of Doores and Windows; but here likewise enters a third respect of Height, a point (I must confesse) hardly reduceable to any generall precept.

True it is, that the *Ancients* did determine the *Longitude* of all Roomes, which were longer then broade, by the double of their *Latitude*, *Vitruuius lib. 6. cap. 5.* And the *Height* by the halfe of the breadth and length summed together But when the Roome was precisely square, they made the *Height* half as much more as the *Latitude*; which Dimensions the moderne *Architects* haue taken leaue to varie vpon discretion: Sometimes squaring the *Latitude*, and then making the *Diagoniall* or ouerthwart Line, from *Angle* to *Angle*, of the said *Square*, the measure of the



*Height* sometimes more, but seldome lower then the full breadth it selfe; which boldnesse of quitting the old *Proportions*, some attribute first to *Michael Angelo da Buonaroti*, perchance vpon the credite he had before gotten, in two other *Arts*.

The second point is *Vsefulnessse*, which will consist in a sufficient *Number* of *Roomes*, of all sorts, and in their apt *Coherence*, without *distractiō*, without *confusion*; so as the beholder may not onely call it, *Vna Fabrica ben raccolta*: as *Italians* vse to speake of well vnit-  
 ted *Workes*, but likewise that it may appeare *aiue* and *spiritous*, and fit for the welcome of cheerefull *Guests*; about which the principall difficultie will bee in contriuing the *Lighes*, and *Staire-cases*, whereof I will touch a note or two: For the first, I obserue that the ancient *Architects* were at much ease. For both the *Greekes* and *Romanes* (of whose priuate dwellings  
*Vi-*



*Vitruuius* hath left vs some description) had commonly two *Cloystered* open *Courts*, one seruing for the *Womens* side, and the other for the *Men*: who yet perchance now adayes would take so much seperation vnkindly. Howsoever, by this meanes, the reception of *light*, into the Bodie of the building, was very prompt, both from without and from within: which we must now supplie either by some open *Forme* of the *Fabrique*, or among gracefull refuges, by *Tarraeing* any *Storie*, which is in danger of darkenesse; or lastly, by *perpendicular lights*, from the *Roofe*: of all other the most naturall, as shalbe shewed anon. For the second difficultie: which is casting of the *Stayre-cases*; That being in it selfe no hard point, but onely as they are incombrances of roome for other vse: (which lights were not) I am therefore aptly moued heere to speake of them. And first of Offices.



I haue marked a willingnesse, in the *Italian Artisans*, to distribute the *Ky-  
clin, Pantrie, Bakehouse, washing Roomes:*  
and euen the *Buttrie* likewise, vnder  
ground; next aboue the *Foundation*, and  
sometimes Leuel with the plaine, or  
*Floore* of the *Cellar*: raysing the first  
*Ascent* into the house *Fifteene Foote* or  
more for that Ende, which besides  
the benefit of remouing such *Annoyes*  
out of sight, and the gayning of so  
much more roome aboue, doth also  
by eleuation of the *Front*, adde *Maiestie*  
to the whole *Aspect*. And with such a  
disposition of the principall *Stayre-case*,  
which commonly doth deliuer vs, into  
the *Plaine* of the second *Storie*, there  
may bee wonders done, with a little  
roome, whereof I could alleadge braue  
*Examples* abroad; and none more Ar-  
tificiall, and Delicious, then a House  
built by *Daniele Barbaro Patriarche* of  
*Aquileia* before mentioned, among the  
memorable *Commenters vpon Vitruuius*.

But



But the *Definition* ( aboue determined ) doth call vs to some consideration of our owne Countrey, where though all the other petty *Offices* ( before rehearsed ) may well enough bee so remote, yet by the naturall *Hospitalitie* of *England*, the *Buttrie* must be more visible; and wee neede perchance for our *Raunges*, a more spacious and luminous *Kitchen*, then the foresaid *Compartition* will beare; with a more competent neerenesse likewise to the *Dining Roome* Or else besides other Inconueniences, perhapes some of the Dishes may straggle by the way; Heere let me note a common defect, that wee haue of a very vsfull *Roome*, called by the *Italians Il Tinello*; and familiar, nay almost essentiall, in all their great *Families*. It is a Place properly appointed, to conserue the meate that is taken from the Table, till the *Waiters* eate, which with vs by an olde fashion, is more vnseemely set by, in the meane while.

Now



Now touching the distribution of *Lodging* chambers; I must here take leaue to reprocue a fashion, which I know not how hath preuailed through *Italie*, though without ancient examples, as farre as I can perceiue by *Vitruuius*. The thing I meane, is, that they so cast their *partitions* as when all *Doors* are open, a man may see through the whole *House*; which doth necessariely put an intollerable seruitude vpon all the *Chambers* saue the *Inmost*, where none can arriue, but through the rest; or else the *Walles* must be extreame thicke for secret passages And yet this also will not serue the turne, without at least *Three* doores to euery *Roome*: A thing most insufferable, in cold & windie Regions, and euery where noe small weakening to the whole *Worke*; Therefore with vs that want no cooling, I cannot commend the direct opposition of such *Ouertures*, being indeede meerely grounded



grounded vpon the fond ambition  
of displaying to a *Stranger* all our *Fur-*  
*niture* at one *Sight*, which therefore is  
most maintained by them that meane  
to harbour but a few; whereby they  
make onely aduantage of the *vanitie*,  
and seldome proue the *Inconuenience*.  
There is likewise another defect (as  
absurdities are seldome solitarie) which  
will necessarily follow, vpon such a ser-  
uile disposing of inward Chambers.  
That they must bee forced to make as  
many common great *Roomes*, as there  
shalbe feuerall *Stories*; which (besides  
that they are vsually darke, a point  
hardly auoided, running as they  
doe, through the middle of the whole  
*House*) doe likewise deuoure so much  
Place, that thereby they want other  
*Galleries*, and *Roomes* of *Retreate*,  
which I haue often considered among  
them (I must confesse) with no small  
wonder; for I obserue no *Nation*  
in the World, by Nature more *private*

K

and



and *referred*, then the *Italian*, and on the other side, in no *Habitations* lesse *privacie*, so as there is a kinde of Conflict, betweene their *Dwelling*, and their *Being*: It might heere perchance bee expected, that I should at least describe (which others haue done in *draughts* and *designes*) diuers *Formes* of *Plants* and *Partitions*, and varieties of *Inuentions*; But *Speculative Writers* (as I am) are not bound, to comprise all particular Cases, within the Latitude of the *Subiect*, which they handle; Generall Lights, and *Directions*, and pointings at some faults, is sufficient. The rest must be committed to the sagacitie of the *Architect*, who will bee often put to diuers ingenious shifts, when hee is to wrestle with scarfitie of *Ground*. As sometimes \* to damme one Roome (though of speciall vse) for the benefit and beautie of all the rest; Another while, to make those fairest, which are most in *Sight*, and to leaue the other (like

The *Italians*  
call it *una*  
*stanza*  
*dannata*,  
as when a  
Buttrie is  
cast vnder a  
a stayre-  
Case, or the  
like.



(like a cunning Painter) in ſhadow, *cum multis alijs*, which it were infinite to purſue. I will therefore cloſe this Part touching *Compartition*, as cheerefully as I can with a ſhort deſcription of a *Feaſting* or *entertayning Roome*, after the *Ægyptian* manner, who ſeeme (at leaſt till the time of *Vitruuius*) from the auncient *Hebrewes* and *Phenicians* (whence all knowledge did flow) to haue retayned, with other *Sciences*, in a high degree, alſo the *Principles*, and *practiſe* of this magnificent *Art*. For as farre as I may coniecture by our Maſters Text, *lib. 6. cap. 5*. (where as in many other Places he hath tortured his *Interpreters*) there could no *Forme*, for ſuch a Royall uſe, bee comparably imagined, like that of the foreſaide *Nation*, which I ſhall aduenture to explaine.

Let vs conceiue a *Floore* or *Area* of goodly length, (For example, at leaſt of 120 foote) with the *breadth* ſome-



what more then the halfe of the *Longitude*, whereof the reason shalbe afterwards rendred. About the two longest *sides*, and *Head* of the said *Roome*, shall runne an Order of *Pillars*, which *Palladio* doth suppose *Corinthian* (as I see by his designe) supplying that point out of *Greece*, becaule we know no *Order*, proper to *Agypt*. The fourth *side* I wil leaue free for the *Entrance*: On the foresaid *Pillars* was laid an *Architraue*, which *Vitruuius* mentioneth alone: *Palladio* addes thereunto ( and with reason ) both *Freeze* and *Cornice*, ouer which went vp a continued *Wall*, and therein, halfe or three quarter *Pillars*, answering directly, to the Order below, but a fourth Part lesse; and betweene these halfe *Columnes* aboue, the whole *Roome* was windowed round about.

Now, from the lowest *Pillars* there was layd ouer a *Contignation* or *Floore*, borne vpon the outward *Wall*, and the  
*Head*



Head of the Columnes with Tarrace and Pavement, *Sub dio* (saith our Master) and so indeed hee might safely determine the matter in Egypt, where they feare no *Clouds*: Therefore *Palladio* (who leaveth this Tarrace vncouered in the middle, and ballised about) did perchance construe him rightly, though therein discording from others: Alwayes we must vnderstand a sufficient breadth of Pavement, left between the open part and the *Windowes*, for some delight of *Spectators*, that might looke downe into the *Roome*: The *Latitude* I haue supposed contrary to some former Positions, a little more then the halfe of the length; because the Pillars standing at a competent distance from the outmost *Wall*, will by interception of the *Sight*, somewhat in appearance diminish the breadth; In which cases, (as I haue touched once or twice before) *Discretion* may bee more licentious then *Art*. This is the



description of an *Egyptian* roome, for *Feastes* and other *Iollities*. About the *Walles* whereof wee must imagine entire *Satues*, placed below, and illuminated by the descending Light, from the *Tarrace*, as likewise from the *Windows* betweene the halfe *Pillars* aboue: So as this *Roome* had abundant and advantageous *Light*; and besides other garnishing, must needes receiue much *State* by the very height of the *Roofe*, that lay ouer two orders of *Columnes*: And so hauing runne through the foure parts of my first generall *Diuision*, namely, *Foundation*, *Walles*, *Appertions*, and *Compartition*; the *House* may now haue leaue to put on his *Hatte*: hauing hitherto beene vncovered it selfe, and consequently vnfit to couer others. Which point though it be the last of this *Art* in execution, yet it is alwayes in *Intention* the first, For who would build but for *Shelter*? Therefore obtrayning both the *Place*, and the dig-



dignity of a *Finall cause*, it hath beene diligently handled by diuerse, but by none more learnedly then *Bernardino Baldi* Abbot of *Guaſtalla* (before cited vpon other occasion) who doth fundamentally, and *Mathematically* demonstrate the firmest *Knittings* of the vpper *Timbers*, which make the *Roofe*. But it hath beene rather my *Scope*, in these *Elements* to fetch the ground of all, from *Nature* her selfe, which indeed is the simplest mother of *Art*. Therefore I will now onely deliuer a few of the properest, and (as I may say) of the naturalest considerations, that belong to this remayning *Piece*.

There are two extremities to be auoyded in the *Couer*, or *Roofe*: That it be not too *heauy*, nor too *light*. The first, will suffer a vulgar obiection of pressing too much the vnder-worke. The other, contayneth a more secret inconuenience; for the *Couer* is not onely a bare defence, but likewise a kinde



kinde of *Bard* or *Ligature*, to the whole *Fabrique*, and therefore would require some reasonable weight. But of the two extreames, a House *Top-beavie* is the worst. Next there must bee a care of *Equality*, that the *Edifice* be not pressed on the one side more then on the other; and here *Palladio* doth wisely (like a cautelous *Artizan*) that the inward *Walles* might beare some good share in the burthen, and the outward be the lesse charged.

Thirdly, the *Italians* are very precise in giuing the *Couer* a gracefull *pence* or *slopenesse*, diuiding the whole breadth into *Nine* parts; whereof two shal serue for the eleuation of the highest *Toppe* or *Ridge*, from the lowest. But in this point the quality of the *Region* is considerable: For (as our *Vitruuius* insinuateth) those *Climes* that feare the falling and lying of much *Snow*, ought to prouide more inclining *Pentices*: and *Comelinesse* must yeeld to *Necessity*.

These



These are the usefulest Cautions which I finde in *Authors*, touching the last *Head* of our Diuision, where-with I will conclude the first *Part* of my present *Trauaile*. The second remayneth, concerning *Ornaments* within, or without the *Fabrique*: A Piece not so dry as the meere Contemplation of proportions. And therefore I hope therein, somewhat to refresh both the *Reader*, and my selfe.

L

OF



OF  
THE ELEMENTS  
OF  
ARCHITECTURE.

*The II. part.*



VERY Mans proper Mansion House and Home, being the Theater of his Hospitality, the Seate of Self-fruition, the Comfortablest part of his owne Life, the Noblest of his Sonnes Inheritance, a kinde of private Princedome; Nay, to the Possessors thereof, an Epitomie of the whole World: may well deserue by these Attributes, according to the degree of the Master, to be decently and delightfully adorned. For which ende, there are two Arts attending on Architecture, like  
two



two of her principall *Gentlewomen*, to *dresse* and *trimme* their *Mistresse*; *P I C-  
TVRE* & *SCVLPTVRE*: Between whom, before I proceed any further, I wil venture to determine an ancient quarrell about their *Precedency*, with this *Distinction*; that in the garnishing of *Fabriques*, *Sculpture* no doubt must haue the *preheminance*, as being indecde of neerer affinity to *Architecture* it selfe, and consequently the more naturall, and more sutable *Ornament*. But on the other side, (to consider these two *Arts* as I shall doe *Philosophically*, and not *Mechanically*) An excellent Piece of *Painting*, is to my iudgement the more admirable *Obiect*, because it comes neere an *Artificiall Miracle*; to make diuerse distinct *Eminences* appeare vpon a *Flat*, by force of *Shadowes*, and yet the *Shadowes* themselues not to appeare: which I conceiue to be the vttermost value and vertue of a *Painter*, and to which very few haue arriued in all *Ages*.



In these two *Arts* (as they are applicable to the *Subiect* which I handle) it shall bee fit first to consider how to *choose* them; and next, how to *dispose* them. To guide vs in the *choyce*, wee haue a *Rule* somewhere (I well remember) in *Pliny*, and it is a prettie obseruation: That they doe mutually helpe to censure one another. For *Picture* is best when it standeth off, as if it were carued; and *Sculpture* is best when it appeareth so *tender*, as if it were *painted*, I meane, when there is such a seeming softnesse in the *Limbes*, as if not a *Chissell* had hewed them out of *Stone*, or other *Materiall*, but a *Pen-sill* had drawne and stroaked them in *Oyle*, which the iudicious *Poet* tooke well to his Fancy.

*Excudent alij spirantia mollius æra.*

But this generalitie, is not sufficient to make a good *chooser*, without a more particular contraction of his Iudgement. Therefore when a Piece of  
*Art*



*Art*, is set before vs, let the first Caution be, not to aske who made it, least the *Fame* of the *Author* doe Captiuate the *Fancie* of the *Buyer*. For, that excellent *Men* doe alwaies excellently, is a false Conclusion; whereupon I obserue among *Italian* Artizans three notable *Phrases*, which well decipher the degrees of their *Workes*.

They will tell you, that a thing was done (*Con diligenza*, *Con studio*, and *Con Amore*; The first, is but a bare and ordinary diligence; The second, is a learned diligence; The third, is much more, euen a louing diligence; They meane not with loue to the *Bespeaker* of the *Worke*, but with a loue and delight in the *Worke* it selfe, vpon some speciall *Fancie* to this, or that *Storie*; And when all these concur (perticularly the last) in an eminent *Author*, Then perchance *Titianus Fecit*, or *ἐπίδρας ἐποίησεν* will serue the *Turne*, without farther *Inquisition*; Otherwise Artizans haue not



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onely their *growthes* and *Perfections*, but likewise their *Vaines* and *Tymes*.

The next Caution must be ( to proccede *Logically* ) that in Iudging of the *Worke* it selfe, wee bee not distracted with too many things at once; Therefore first ( to beginne with *Picture* ) we are to obserue whether it bee well *drawne*, ( or as more elegant *Artizans* tearme it ) well *Design'd*; Then whether it be well *Coloured*, which bee the two generall *Heads*; And each of them hath two principall *Requisites*; For in well *Designing*, there must bee *Truth* and *Grace*, In well *Colouring*, *Force*, and *Affection*; All other *Praises*, are but Consequences of these.

*Truth* ( as we Metaphorically take it in this *Art* ) is a *Iust* and *Naturall Proportion*, in euery Part of the determined *Figure*. *Grace* is a certaine *free disposition*, in the whole *Draught*, answerable to that vnaffected franknes of *Fashion*, in a liuing *Bodie*, Man or Woman, which



which doth *animate Beautie* where it is,  
and *supplie* it, where it is not,

*Force* consisteth, in the *Roundings & Raisings* of the *Worke*, according as the *Limbes* doe more or lesse require it; So as the *Beholder*, shall spie no *sharpenesse* in the bordering *Lines*; As when *Taylors* cut out a *Sute*, which *Italians* doe aptly tearme according to that comparison, *Contorni taglianti*; Nor any *flatnesse* within the *Bodie* of the *Figure*, which how it is done, we must fetch from a higher *Discipline*; For the *Optiques* teach vs. That a *plaine*, will appeare *prominent*, and (as it were) *embossed*, if the *Parts* farthest from the *Axel-tree* or middle *Beame* of the *Eye*, shalbe the most *shadowed*. Because in all *Darknesse*, there is a kinde of *Deepenesse*, But as in the *Arte* of *perswasion*, one of the most *Fundamentall Precepts* is; the *concealement* of *Arte*, Soe here likewise, the *Sight* must be sweetly deceaued, by an insensible passage, from *brighter colours*



lours, to *dimmer*, which *Italian Artizans* calle the *middle Tinctures*; That is, Not as the *whites*, and *yolkes* of *Egges* lie in the *Shell*, with visible distinction; But as when they are *beaten*, and *blended*, in a *Dish*: which is the neereſt comparison, that I can ſuddenly conceiue.

Laſtly, *Affection* is the *Liuely Representation*, of any *paſſion* whatſoeuer, as if the *Figures* ſtood not vpon a *Cloth* or *Boorde*, but as if they were *acting* vpon a *Stage*; And heere, I muſt remember, in truth with much marueile, a note, which I haue receiued, from excellent *Artizans*, that though *Gladneſſe*, and *Griefe*, be oppoſites in *Nature*; yet they are ſuch *Neighbours* and *Confiners* in *Arte*, that the leaſt touch of a *Penſill*, will tranſlate a *Crying*, into a *Laughing Face*; which *Inſtance*, beſides diuers other, doth often reduce vnto my memorie, that Ingenious *Speculation*, of the *Cardinall Cuſanus* extant in his *Workes*, touching the *Coincidence* of extremes,



*extremes.* And thus much of the four *Requisites*, and *Perfections* in *Picture*.

In *Sculpture* likewise, the *Two* first are absolutely necessarie; The *third* impertinent; For *Solide* Figures neede no elevation, by force of *Lights*, or *shadows*; Therefore in the Roome of this, wee may put (as hath beene before touched) a kinde of *Tenderneſſe*, by the *Italians* termed *Morbidezza*, wherein the *Chiffell*, I must confesse, hath more glory then the *Penſill*; that being so hard an *Instrument*, and working vpon so vnpliant stufſe, can yet leaue *Strokes* of so gentle appearance.

The *Fourth*, which is the expreſſing of *Affection* (as farre as it doth depend vpon the *Actiuitie*, and *Gesture* of the *Figure*) is as proper to the *Caruer*, as to the *Painter*; though *Colours*, no doubt, haue therein the greatest *Power*; whereupon, perchance, did first grow with vs the *Faſhion* of *colouring*, euen *Regall Statues*, which I must take leaue to call



Now in these fower *Requisites* already rehearsed, it is strange to note, that no *Artizan*, hauing euer beene blamed for exceſſe in any of the three laſt; onely *Truth* ( which ſhould ſeeme the moſt *Innocent* ) hath ſuffered ſome Obiecti- on, and all *Ages*, haue yeelded ſome one or two *Artificers*, ſo prodigiouſly ex- quiſite, that they haue beene reputed too *Naturall*, in their *Draughts*; which will well appeare, by a famous Paſſage in *Quintilian*, touching the *Characters* of the ancient *Artizans*, falling now ſo aptly into my memory, that I muſt needes tranſlate it, as in truth it may well deſerue.

The Place which I intend, is extant in the laſt *Chapter* ſaue one of his whole *Worke*, beginning thus in *Latine*.

*Primi, quorum quidem opera non vetus- tatis modo gratia viſenda ſunt clari Pictor- es fuiſſe dicuntur, Polygnotus atque Aglao- phon &c.*

The



The whole *Passage*, in *English*  
standeth thus:

**T**He first *Painters* of name,  
whose *Workes* bee considerable  
for any thing more then onely  
*Antiquitie*, are said to haue beene *Polyg-  
notus*, and *Aglaophon*; whose bare *Colou-  
rings* (hee meanes I thinke in *white* and  
*blacke*) hath euen yet so many followers,  
that those rude and first *Elements*, as it  
were of that, which within a while,  
became an *Arte*, are preferred, before  
the greatest *Painters* that haue beene  
extant after them, out of a certaine  
*Competition* (as I conceiue it) in point  
of *Iudgement*. After these, *Zeuxes* and  
*Parafius* not farre distant in age, both a-  
bout the time of the *Peloponesian Warre*,  
(for in *Xenophon* wee haue a Dialogue  
betweene *Parafius* and *Socrates*) did  
adde much to this *Arte*. Of which  
the *first* is said, to haue inuented the  
due disposition of *Lights* and *Shadewes*;



The *second*, to haue more subtilly examined, the *truth* of *Lines* in the *Draught*; for *Zeuxes* did make *Limbes*, bigger then the *life*; deeming his *Figures*, thereby the more *stately* and *Maiesticall*; & therein (as some thinke) imitating *Homer*, whom the *stoutest* forme doth please, euen in *Women*. On the other side, *Parasius* did exactly limit al the *Proportions* so, as they call him the *Law giuer*, because in the *Images* of the *Gods* and of *Heroicall Personages*, others haue followed his *Paternes* like a *Decree*; But *Picture* did most flourish, about the daies of *Phillip* and euen to the *Successours* of *Alexander*; yet by sundry *habilities*; for *Protogenes*, did excell in *Diligence*; *Pamphilus* and *Melanthius* in due *Proportion*, *Antiphilus* in a *Franke Facilitie*; *Theon* of *Samos*, in *strength* of *Fantasie* and conceiuing of *Passions*; *Apelles*, in *Inuention*, and *Grace*, whereof hee doth himselfe most vaunte; *Euphranor*, deserues admiration,



tion, that being in other excellent *studies*, a principall Man, he was likewise a wondrous Artizan, both in *Painting* and *Sculpture*. The like difference we may obserue among the *Statuaries*; for the workes of *Calon* and *Egesias* were somewhat *stiffe*, like the *Tuscan* manner; Those of *Calamis* not done with so cold stroakes; And *Myron* more tender then the former; a diligent *Decency* in *Polycletus* aboue others, to whom though the highest prayse bee attributed by the most, yet lest he should goe free from exception, some thinke hee wanted *solemnnesse*; for as he may perchance be layd to haue added a comely *dimension* to humane shape, somewhat aboue the *truth*; so on the other side, hee seemed not to haue fully expressed the *Maiesty* of the *Gods*: Moreouer, hee is sayd not to haue medled willingly with the *grauer age*, as not aduenturing beyond *smooth cheekes*: But these vertues that were wanting in *Polycletus*,



*lycletus*, were supplied by *Phidias* and *Alcmenes*, yet *Phidias* was a better Artizan in the representing of Gods, then of Men; and in his workes of *Iuorie*, beyond all emulation, euen though hee had left nothing behinde him, but his *Minerua* at *Athens*, or the *Olympian Iupiter* in *Elis*, whose *Beautie* seemes to haue added somewhat, euen to the receiued Religion; the *Maiestie* of the Worke, as it were equalling the Deity. To Truth, they affirme *Lysippus* and *Praxiteles*, to haue made the neereſt approach: for *Demetrius* is therein reprehended, as rather exceeding then deficient; hauing beene a greater aymer at *Likenes*, then at *Louelines*.

This is that witty Censure of the ancient Artizans, which *Quintilian* hath left vs, where the last Character of *Demetrius* doth require a little Philosophicall examination; How an Artificer, whose end is the imitation of Nature, can bee too naturall; which likewise



wise in our dayes was either the fault,  
or (to speake more gently) the too  
much perfection of *Albert Durer*, and  
perhaps also of *Michael Angelo da Buos  
naroti*, betweene whom I haue heard  
noted by an ingenious *Artizan*, a pre-  
ty nice difference, that the *German* did  
too much expresse *that which was*, and  
the *Italian*, *that which should be*: Which  
seuere obseruation of *Nature*, by the  
one in her *commonest*, and by the other  
in her *absolute* *Formes*, must needs  
produce in both a kinde of *Rigidity*,  
and consequently more *naturalnesse*  
then *gracefulnesse*: This is the clee-  
rest reason, why some exact *Symme-  
trists* haue been blamed, for being too  
true, as neere as I can deliuer my con-  
ceit. And so much touching the  
choyce of *Picture* and *Sculpture*: The  
next is, the *application* of both, to the  
*beautifying* of *Fabriques*.

First therefore touching *Picture*,  
there doth occurre a very pertinent  
doubt,



doubt, which hath beene passed ouer too slightly, not onely by some *Men*, but by some *Nations*; namely, whether this *Ornament* can wel become the *Out-side* of houses, wherein the *Germanes* haue made so little scruple, that their best *Townes* are the most painted, as *Augusta* and *Norembergh*. To determine this question in a word: It is true, that a *Story* well set out with a good *Hand*, will euery where take a *Iudicious* eye: But yet withal it is as true, that various colours on the *Out-walles* of *Buildings*, haue alwayes in them more *Delight* then *Dignity*: Therefore I would there admit no *Paintings* but in *Blacke* and *White*, nor euen in that kinde any *Figures* (if the roome be capable) vnder *Nine* or *Ten* foot high, which will require no ordinary *Artizan*; because the faults are more *visible* then in small *Designes*. In vnfigured *paintings* the noblest is, the imitation of *Marbles*, & of *Architecture* it selfe, as *Arches*, *Treezes*,  
Columns,



Columns, and the like.

Now for the *Inside*, heere growes another doubt, whether *Grotesca* (as the *Italians*) or *Antique* worke (as wee call it) should be receiued, against the expresse authoritie of *Vitruuius* himselfe, *lib. 7. cap. 5.* where *Pictura* (saith hee) *Fit eius, quod est, seu potest esse*, excluding by this seuer definition, all *Figures* composed of different *Natures* or *Sexes*; so as a *Syrene* or a *Centaure* had beene intolerable in his eye: But in this wee must take leaue to depart from our *Master*, & the rather because he spake out of his owne *profession*, allowing *Painters* (who haue euer bin as little limited as *Poets*) a lesse scope in their imaginations, euenthen the grauest *Philosophers*, who sometimes doe serue themselves of *Instances*, that haue no *Existence* in *Nature*; as wee see in *Platoes Amphisbæna*, & *Aristotles Hirco-Ceruus*. And (to settle this point) what was indeede more common and fami-

N

liar



liar among the *Romanes* themselves, then the *Picture* and *Statue* of *Terminus*, euen one of their *Deities*? which yet if we well consider, is but a piece of *Grotesca*; I am for these reasons vnwilling to impouerish that *Art*, though I could wish such *medlie* and *motlie* Designs, confined onely to the *Ornament* of *Freezes*, and *Borders*, their properest place. As for other *Storied* Workes vpon *Walles*, I doubt our *Clime* bee too yeelding and moist, for such *Garnishment*; therefore leauing it to the *Dwellers* discretion, according to the qualitie of his *Seat*; I will onely adde a caution or two, about the disposing of *Pictures* within.

First, that no *Roome* bee furnished with too many, which in truth were a *Surfet* of *Ornament*, vnlesse they bee *Galleries*, or some peculiar *Repository* for *Rarities* of *Art*.

Next, that the best *Pieces* be placed not where there is the *least*, but where there



there are the fewest lights; therefore not onely *Roomes* windowed on both ends, which we call through-lighted; but with two or more *Windows* on the same side, are enemies to this *Art*; and sure it is, that no *Painting* can be seene in full *Perfection* but (as all *Nature* is illuminated) by a single *Light*.

Thirdly, that in the placing there be some care also taken, how the *Painter* did stand in the *Working*, which an intelligent *Eye*, will easily discouer, and that *Posture* is the most naturall; so as *Italian* pieces will appeare best in a *Roome* where the *Windows* are high; because they are commonly made to a descending *Light*, which of all other doth set off mens *Faces* in their truest *Spirit*.

Lastly, that they bee as properly bestowed for their *quality*, as fitly for their *grace*: that is, chearefull *Paintings* in *Feasting* and *Banquetting* *Roomes*; *Graver* *Stories* in *Galleries*, *Land-schips*, and



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*Boscage*, and such *wilde* workes in open *Tarraces*, or in *Summer houses* (as we call them) and the like.

And thus much of *Picture*, which let mee close with this Note; that though my former Discourse may serue perchance for some reasonable *leading* in the choyce of such delights; yet let no man hope by such a *speculative* erudition, to discerne the *Masterly* and *Mysterious* touches of *Art*, but an Artizan himselſe; to whom therefore we must leaue the *prerogative*, to censure the manner and handling, as hee himselſe must likewise leaue some points, perchance of no lesse value to others; as for example, whether the *Story* be rightly *represented*, the *Figures* in true *action*, the *Persons* *suted* to their seuerall qualities, the *affections* proper and *strong*, and such like obseruations.

Now for *Sculpture*, I must likewise begin with a *Controuersie*, as before (falling into this Place) or let mee rather



ther call it a very meere *Fancie*, strangely taken by *Palladio*, who hauing noted in an old *Arch* or two at *Verona*, some part of the *Materials* already cut in fine *Formes*, and some *Unpolished*, doth conclude (according to his *Logicke*) vpon this particular, that the *Auncients* did leaue the outward *Face*, of their *Marbles* or *Free-Stone*, without any *Sculpture*, till they were laid, and *Cimented*, in the bodie of the *Building*; For which likewise hee findeth a reason (as many doe now and then very wittily, euen before the thing it selfe be true) that the *Materialls* being left *rough* were more managable in the *Masons* hand, then if they had beene *smooth*; And that so the *sides* might bee laide together the more exactly; Which Conceit, once taken hee seemes to haue farther imprinted, by marking in certaine *Storied Sculptures*, of oulde time how precisely the parts and *Lines* of the *Figures* that passe from one Stone



to another, doe meete; which hee thinkes could hardly fall out so right, (forgetting while hespeake of *auncient* things, the *auncient Diligence*) vnlesse they had beene cut, after the ioyning of the *Materials*, But all these *Inducements*, cannot counteruaile the sole *Inconuenience* of *shaking*, and *Disioynting* the *Commissures* with so many Strokes of the *Chissell*, besides an *Incommodious* Working on *Scaffolds*; especially hauing no testimonie, to confirme it, that I haue yet seene among the records of *Art*; Nay, it is indeede rather true, that they did *square*, and *Carue*, and *Polish*, their *Stone* and *Marble* Workes, euen in the very *Cau*e of the *Quarrie*, before it was hardened by open Aire; But (to leaue disputation) I will set downe a few *Positiue* notes, for the placing of *Sculpture*; because the chusing hath beene handled before.

That first of all, it bee not too *gerall* and *abundant*, which would make



a House, looke like a Cabbinet, & in this point, *morall Philosophie* which tempereth *Fancies*, is the *Superintendent of Art*.

That especially, There bee a due moderation of this Ornament in the first approach; where our Authors doe more commend, (I meane about the Principall Entrance) A *Dorique*, then a *Corinthian* garnishment; So as if the great Doore, be *Arched*, with some braue Head, cut in fine Stone or Marble for the Keie of the Arch, and two *Incumbent* Figures gracefully leaning vpon it, towards one another, as if they meant to conferre; I should thinke this a sufficient entertainment, for the first Reception, of any *Iudicious* Sight, which I could wish seconded, with two great standing Statues on each side of a paved way that shall leade vp into the *Fabrique*, So as the *Beholder* at the first entrance, may passe his Eye betweene them.

That the *Nices*, if they containe *Figures*



gures of white Stone or Marble, bee not coloured in their *Concauitie* too blacke, For though *Contraria iuxta se posita magis illucescunt* (by an olde Rule) yet it hath beene subtilly, and indeede truly noted that our *Sight*, is not well contented, with those sudden departments, from one extreame, to another, Therefore let them haue, rather a *Dusky* Tincture, then an absolute blacke.

That *fine* and delicate *Sculptures*, be helped with *Neerenes*, and *Grosse* with *distance*; which was well seene in the olde controuersie, betweene *Phidias* and *Alcmenes* about the Statue of *Venus*: wherein the First did shew discretion, and saue labour, because the *Worke* was to bee viewed at good *Height*, which did drowne the sweete and diligent strokes of his *Aduersarie*: A famous emulation of two principall *Artizans*, celebrated euen by the Greeke *Poets*.

That in the placing of standing *Figures*



gures aloft, wee must set them in a *Posture* somewhat bowing forward; because (saith our Master, *lib. 3. cap. 3.* out of a better *Art* then his owne) the *visuall beame* of our eye, extended to the *Head* of the said *Figures*, being longer then to the *Footes*, must necessarily make that *part* appeare *farther*; so as to reduce it to an erect or vpright *position*, there must be allowed a due advantage of *stooping* towards vs; which *Albert Durer* hath exactly taught, in his fore mentioned *Geometry*. Our *Vitruvius* calleth this affection in the *Eye*, a *resupination* of the *Figure*: For which word (being in truth his owne, for ought I know) wee are almost as much beholding to him, as for the obseruation it selfe: And let thus much summarily suffice, touching the choice and vse of these adorning *Arts*. For to speake of garnishing the *Fabrique* with a *Row* of erected *Statues*, about the *Cornice* of euery *Contignation*



or Story, were discourse more proper for *Athens* or *Rome*, in the time of their true greatnesse, when (as *Plinie* recordeth of his own *Age*) there were neere as many carued *Images*, as liuing *Men*; like a noble contention, euen in point of *Fertility*, betweene *Art* and *Nature*; which passage doth not onely argue an infinite abundance, both of *Artizans* and *Materials*; but likewise of *Magnificent* and *Majesticall* desires, in euery common person of those times; more or lesse according to their *Fortunes*. And true it is indeed that the *Marble Monuments & Memories* of well deseruing *Men*, wherewith the very high wayes were strewed on each side was not a bare and transitory entertainment of the *Eye*, or onely a gentle deception of *Time*, to the *Trauailer*: But had also a secret and strong *Influence*, euen into the aduancement of the *Monarchie*, by continuall representation of vertuous examples; so as in  
that



that point *A R T* became a piece of *State*.

Now as I haue before subordinated *Picture*, and *Sculpture* to *Architecture*, as their Mistresse; so there are certaine inferior *ARTS* likewise subordinate to them: As vnder *Picture*, *Mosaique*; vnder *Sculpture*, *Plastique*; which two, I onely nominate, as the fittest to garnish *Fabriques*.

*Mosaique* is a kinde of Painting in small *Pebbles*, *Cockles* and *Shells* of sundry colours; and of late dayes likewise with pieces of *Glasse*, figured at pleasure; an *Ornament* in trueth, of much beauty, and long life, but of most vse in *pauements* and *Floorings*.

*Plastique* is not onely vnder *Sculpture*, but in deed very *Sculpture* it selfe: but with this difference; that the *Plasterer* doth make his Figures by *Addition*, and the *Caruer* by *Substraction*, whereupon *Michael Angelo* was wont to say somewhat pleasantly: That *Sculp-*



ture was nothing but *A purgation of superfluities*. For take away from a piece of wood, or stone, all that is *superfluous*, and the remainder is the intended *Figure*. Of this *Plastique Art*, the chiefe use with vs is in the gracefull *fretting* of roofes : but the *Italians* applie it, to the *manteling* of *Chimneys*, with great Figures. A cheape piece of *Magnificence*, and as durable almost within doores, as harder *Forms* in the weather. And here though it bee a little excursion, I cannot passe vnremembred a gaine, their manner of disguising the shaftes of *Chimneys* in various fashions, whereof the noblest is the *Pyramidall*: beeing in trueth a piece of polite and ciuill discretion, to conuert euen the *conduits* of soote and smoake, into *Ornaments*; whereof I haue hitherto spoken as farre as may concerne the Bodie of the Building.

Now there are *Ornaments* also without, as *Gardens, Fountaines, Groues, Conserua.*



servatories of rare Beasts, Birds, and Fishes. Of which ignobler kind of Creatures, Wee ought not (saith our greatest

\* Master among the sonnes of Nature) childishly to despise the Contemplation; for in all things that are naturall, there is ever something, that is admirable. Of these externall delights, a word or two.

\* Arist. lib. 1  
cap. 5. de  
part. Anim.  
δει μὲν εὐχρη-  
στὴν παιδικῶς  
τὴν δὲ τῷ ἀν-  
θρώπῳ ζῶντι  
ὀφειστέαν. Ἐν  
πᾶσι γὰρ τοῖς  
φυσικοῖς ἔστι τι  
θαυμάσιον.

First, I must note a certaine contra-  
rietie betweene building and gardening:  
For as Fabriques should bee regular, so  
Gardens should bee irregular, or at least  
cast into a very wilde Regularitie. To  
exemplifie my conceit; I haue seene  
a Garden (for the maner perchance in-  
comparable) into which the first Ac-  
cesse was a high walke like a Tarrace,  
from whence might bee taken a gene-  
rall view of the whole Plott below; but  
rather in a delightfull confusion, then  
with any plaine distinction of the pie-  
ces. From this the Beholder descending  
many steps, was afterwards conueyed  
againe, by severall mountings and va-  
lings,



lings, to various entertainments of his  
*sent*, and *sight*: which I shall not neede  
to describe (for that were poetically)  
let me onely note this, that eucry one  
of these diuersities, was as if hee had  
beene *Magically* transported into a new  
Garden.

But though other *Countreys* haue  
more benefite of Sunne then wee, and  
thereby more properly tyed to con-  
template this delight; yet haue I seene  
in our *owne*, a delicate and diligent *cu-  
riositie*, surely without *parallel* among  
foreign *Nations*: Namely, in the Gar-  
den of Sir *Henry Fanshaw*, at his seat  
in *Ware-Parke*, where I wel remember,  
hee did so precisely examine the *tin-  
ctures*, and *seasons* of his *flowres*, that in  
their *setting*, the *inwardest* of those  
which were to come vp at the same  
time, should be alwayes a little *darker*  
then the *outmost*, and so serue them for  
a kinde of gentle *shadow*, like a piece  
not of *Nature*, but of *Arte*: which men-  
tion



tion (incident to this place) I haue willingly made of his *Name*, for the deare *friendship* that was long betweene vs: though I must confesse, with much wrong to his other *vertues*; which deserue a more solide *memoriall*, then among these vacant obseruations. So much of *Gardens*.

*Fountaines* are *figured*, or only plaine *Water'd-workes*: Of either of which, I will describe a matchlesse patterne.

The first, done by the famous hand of *Michael Angelo da Buonaroti*, in the figure of a sturdie woman, *washing* and *winding* of linnen clothes; in which Acte, shee *wrings* out the water that made the *Fountain*; which was a gracefull and naturall conceit in the Artificer, implying this rule; That all *designes* of this kind, should be *proper*.

The other doth merite some larger expressiō; There went a long, straight, mossie walke of competent breadth, greene, and soft vnder foot, listd on  
both



both sides with an *Aqueduct* of white stone, breast-high, which had a hollow *channell* on the top, where ranne a pretty trickling streame; on the *edge* whereof, were couched very thicke all along, certaine small *pipes* of lead, in little holes; so neatly, that they could not be well perceiued, till by the turning of a cocke, they did sprout ouer interchangeably from side to side, aboue mans height, in forme of *Arches*, without any interfection or meeting aloft, because the pipes were not exactly opposite; so as the *Bekolder*, besides that, which was fluent in the *Aqueducts* on both hands in his view, did walke as it were, vnder a continuall *bowre* or *Hemisphere* of water, without any drop falling on him. An *invention* for refreshment, surely farre excelling all the *Alexandrian* delicacies, and *Pneumatiques* of Hero.

Groues, and artificiall deuices vnder ground, are of great expence, and little dignitie;



dignitie; which for my part I could wish conuerted here into those *Crypteria*, whereof mention is made among the curious prouisions of *Ticho Braghe* the *Danish Ptolemie*, as I may well call him: which were deepe *concaues* in gardens, where the *starres* might be obserued euen at *noone*. For (by the way) to thinke that the brightnesse of the Sunnes body aboue, doth drowne our discerning of the lesser lights, is a popular error; the sole impediment being that lustre, which by *reflection*, doth spread about vs, from the face of the Earth; so as the *caues* before touched, may well conduce, not to a delicious, but to a learned pleasure.

In *Auiaries* of wire, to keepe Birdes of all sorts, the *Italians* (though no wastfull Nation) doe in some places bestow vast expence; including great scope of ground, varietie of *bushes*, *trees* of good height, running *waters*, and sometimes a *Stoue* annexed, to con-

P

temper



temper the *Aire* in Winter. So as those *Chanteresses*, vnlesse they be such as perhaps delight as much in their wing, as in their voice, may liue long, among so good prouisions and roome, before they know that they are *prisoners*; reducing often to my memory, that conceit of the *Romane Stoicke*, who in comparison of his owne free contemplations, did thinke diuers great and splendent fortunes of his time, little more then *commodious captiuities*.

Concerning Ponds of pleasure neere the habitation; I will referre my selfe to a graue *Author* of our owne (though more illustrious by his other\* worke) namely *Sarisburyensis de Piscinâ*.

\* *De Nugis  
Curial. &c.*

And here I will end the second part touching *Ornaments*, both *within*, and *without* the *Fabrique*.

Now as almost all those, which haue deliuered the *Elements* of *Logicke*, do vsually conclude, with a Chapter touching *Method*; so I am heere seized with



Roomes of the *Fabrique*, which suddenly where it is taketh euery *Beholder*, by the secret power of *Proportion*: wherein let mee onely note this, That though the least error or offence that can be committed against *sight*, is excessse of height; yet that fault is nowhere of small importance, because it is the greatest offence against the *Purse*.

*Symmetria* is the *conueniencie* that runneth betweene the *Parts* and the *Whole*, whercof I haue formerly spoken.

*Decor* is the keeping of a due *Respect* betweene the *Inhabitant*, and the *Habitation*. Whence *Palladius* did conclude, that the principall *Entrance* was neuer to be regulated by any certaine *Dimensions*; but by the dignity of the *Master*; yet to exceede rather, in the more, then in the lesse, is a marke of *Generosity*, and may alwayes be excused with some noble *Embleme*, or *Inscription*,



on, as that of the *Conte di Beuilacqua*, ouer his large Gate at *Verona*, where perchance had beene committed a little *Disproportion*.

*Patet Ianua: Cor magis.*

And heere likewise I must remember our euer memorable Sir *Philip Sidney*, (whose *VVit* was in truth the very rule of *Congruity*) who well knowing that *Basilus* (as hee had painted the *State* of his *Minde*) did rather want some extraordinary *Formes* to entertaine his *Fancie*, then roome for *Courtiers*; was contented to place him in a *Star-like Lodge*; which otherwise in seuerer *Iudgement* of *Art* had beene an incommodious *Figure*.

*Distributio* is that vsfull *Castling* of all *Roomes* for *Office*, *Entertainment*, or *Pleasure*, which I haue handled before at more length, then any other *Piecc*.

These are the *Foure Heads* which euery man should runne ouer, before  
hee



hee passe any determinate *Censure*, vpon the Works that he shal view, where-with I will close this last part, touching *Ornaments*. Against which (mee thinkes) I heare an *Obiection*, euen from some well-meaning man; That these delightfull *Craftes*, may be diuers wayes ill applied in a *Land*. I must confesse indeede, there may bee a *Lasciuious*, and there may be likewise a *superstitious* vse, both of *Picture* and of *Sculpture*: To which possibility of misapplication, not onely these *Semi-liberall Arts* are subiect; but euen the highest perfections, and *endowments* of *Nature*. As *Beautie* in a light woman, *Eloquence* in a mutinous Man, *Resolution* in an *Assasinate*, *Prudent obseruation* of houres & humours, in a corrupt Courtier, *Sharpenesse* of wit and argument in a seducing Scholler; and the like. Nay, finally let mee aske, what *ART* can be more pernicious, then euen *RELIGION* it selfe, if it selfe be con-  
Q
uerted



verted into an Instrument of ART:  
Therefore, *Ab abuti ad non uti, negatur  
consequentia.*

Thus having stitched in some sort  
together, these *Animadversions*, tou-  
ching *Architecture*, and the Orna-  
ments thereof; I now feele that con-  
templative spirits are as restless as a-  
ctive; for doubting with my selfe, (as  
all weakenesse is iealous) that I may be  
thought to haue spent my poore ob-  
seruation abroad, about nothing but  
Stone and Timber, and such Rubbage;  
I am thereby led into an immodestie  
of proclaiming another Worke, which  
I haue long deuoted to the seruice of  
my Countrey. Namely, *A Philosophi-  
call Suruey of Education*, which is indeed,  
a second *Building*, or repairing of Na-  
ture, and, as I may tearme it, a kinde of  
*Morall Architecture*; whereof such  
Notes as I haue taken in my foreigne  
travell.



transcursions or abodes, I hope to vt-  
ter without publike offence, though  
still with the freedome of a plaine *Ken-*  
*tish* man. In the meane while I haue  
let these other *Gleanings* flie a-  
broad, like the Bird out of the  
*Arke*, to discouer what foo-  
ting may bee, for that  
which shall  
follow.

FINIS.

Errata.

Pag.6.lin.8. for as, reade is. Pag.48. lin.2. for cuncatim, reade  
cuncatim. Pag.77. lin.6. for (wo, read (who. Pag.80. lin.9. for  
wisely, reade with. Pag.88. lin. 19. omitted in the Margin the  
verses following, touching the coincidence of extreame affecti-  
ons; represented by *Homer* in the person of *Hectors* wife; as  
*Painters* and *Poets* haue alwaies had a kind of congeniality.

Ι Α Ι Α Δ. ζ.

Ὡς εἰπὼν ἀλόχοιο φίλης ἐν χέρσιν ἔθηκε,

Παῖδ' ἔδν, ἥδ' ὄρα μιν κνώδει δίζατο κόλπον.

Δακρύεν γελᾶσα. --- That is,

Shee rooke her sonne into her armes, wee-  
pingly laughing.

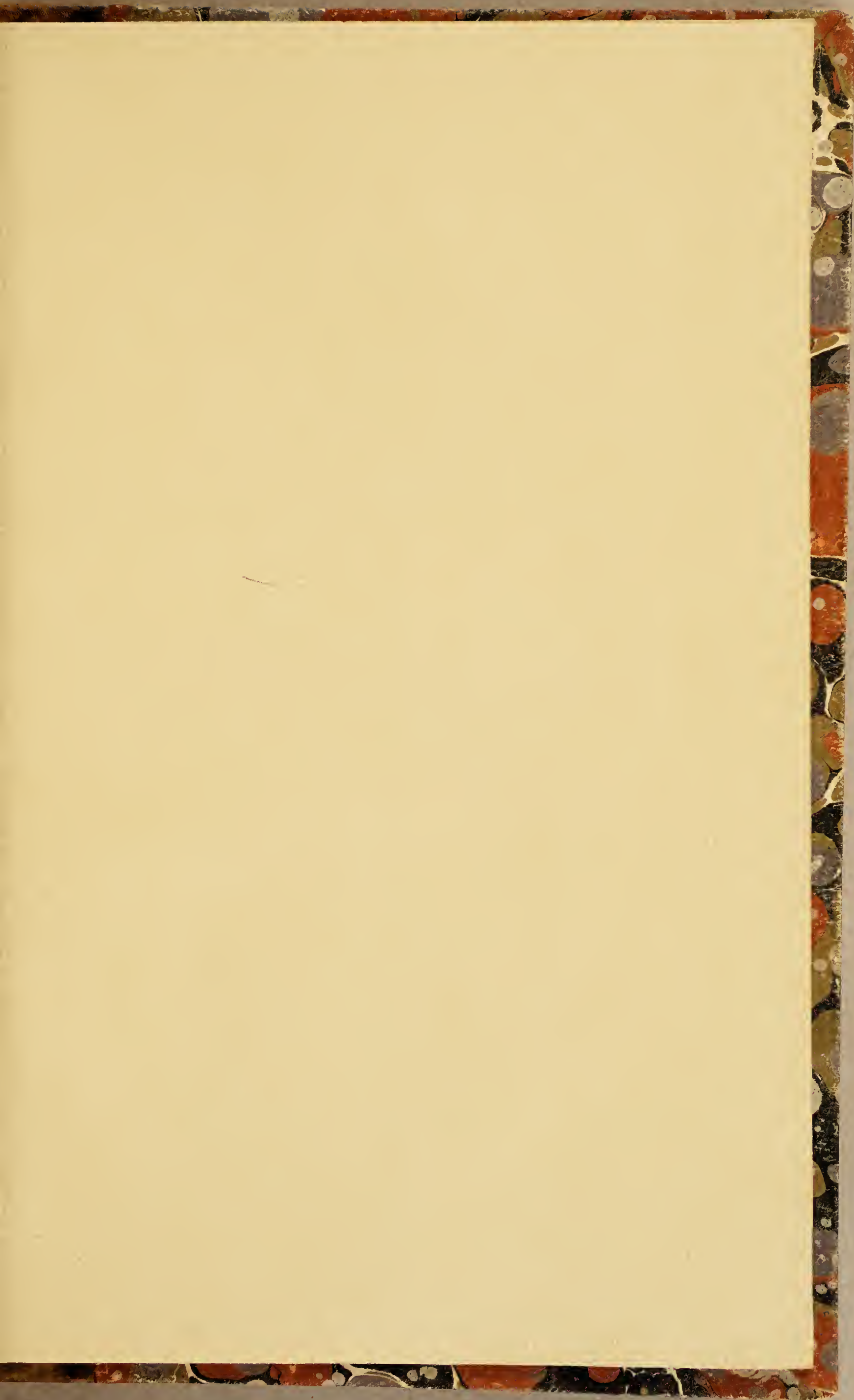


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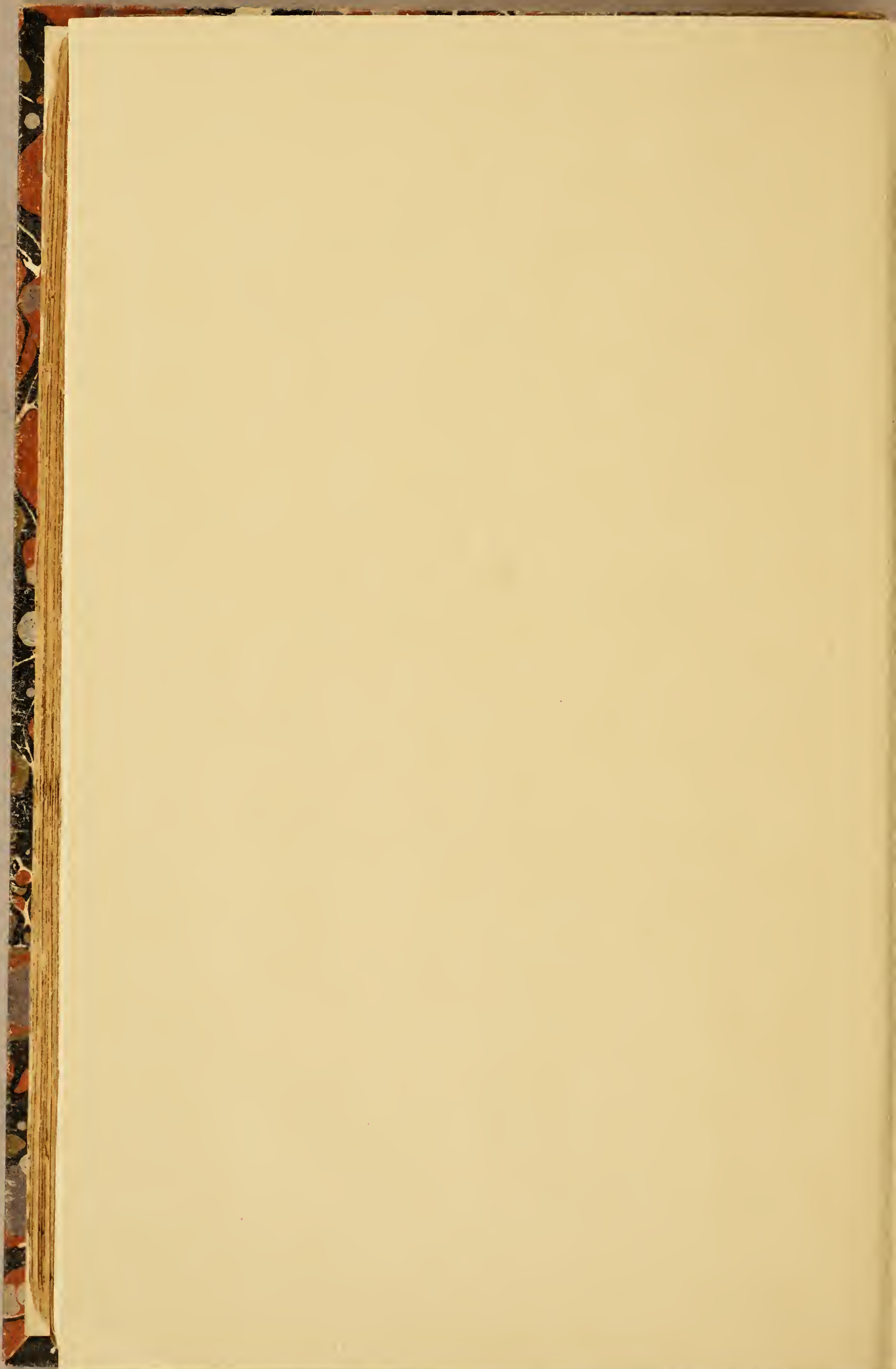
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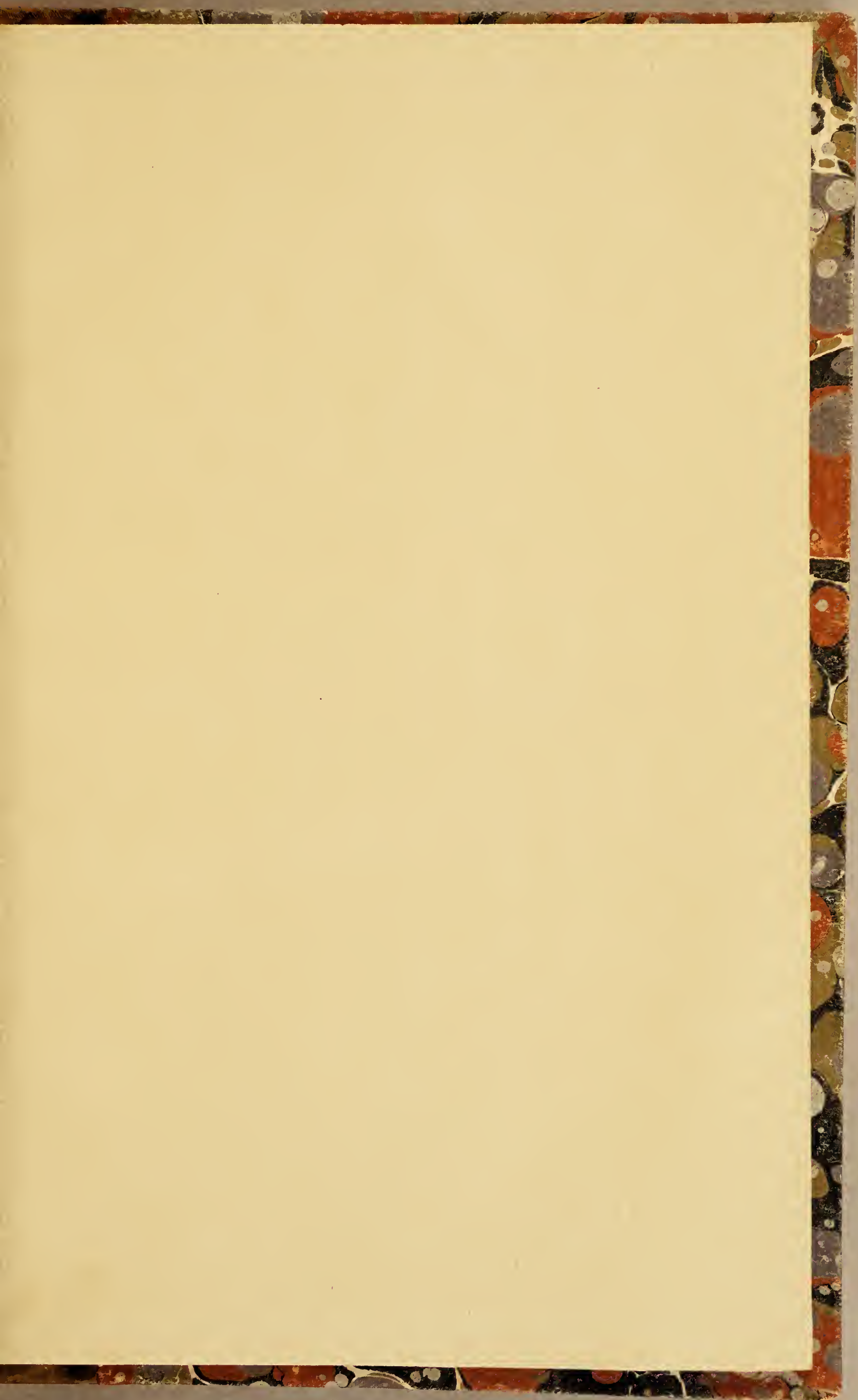




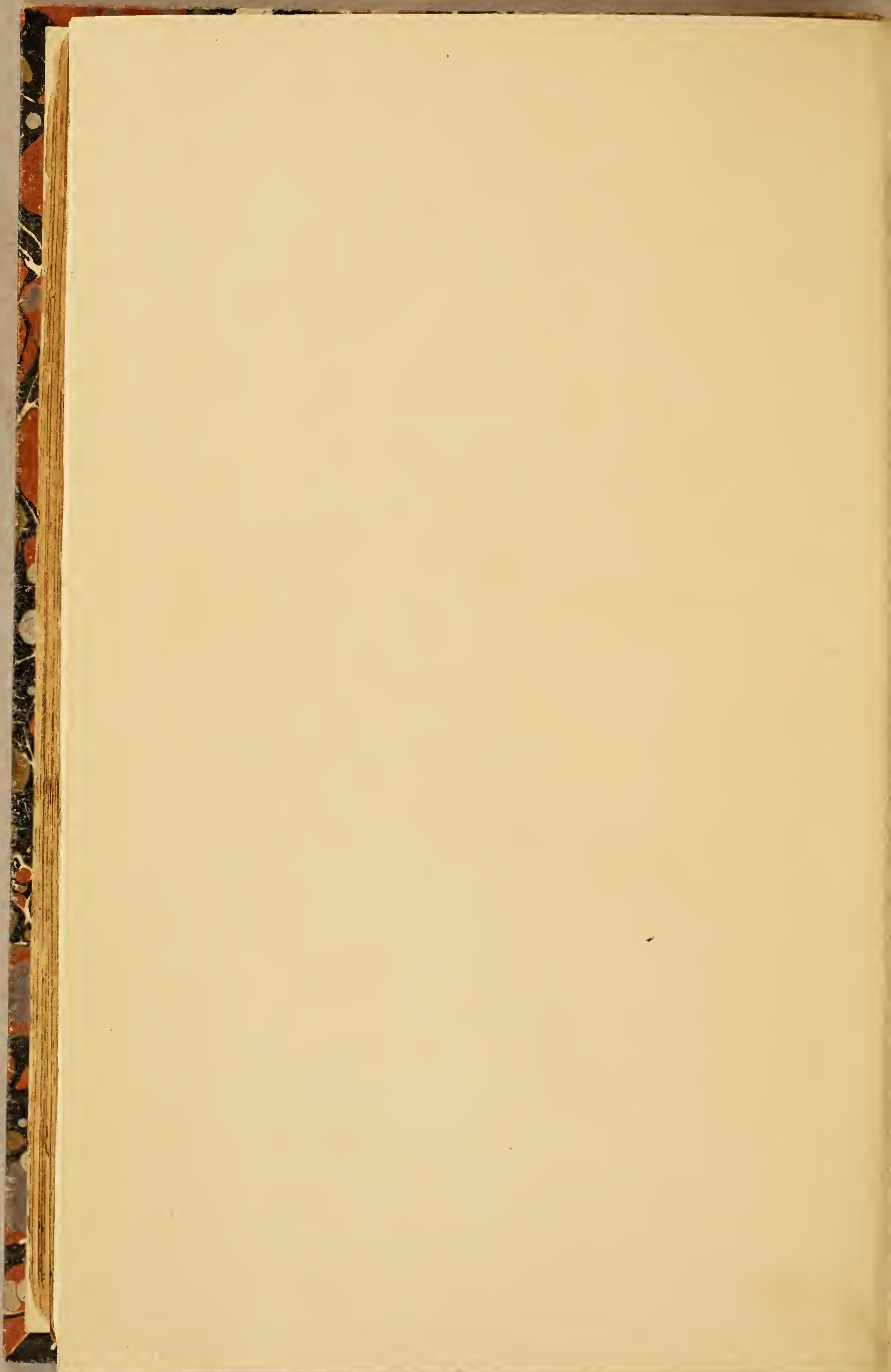














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